

2018 SUSPENSION**Rear Suspension - Equinox & Terrain****SPECIFICATIONS****FASTENER SPECIFICATIONS****Single Use Threaded Fastener/Component Tightening Specifications**

NOTE: <i>All fasteners/components listed in this table MUST BE DISCARDED and replaced with NEW after removal.</i>	
Application	Specification
	Metric (English)
Rear Shock Absorber Bolt (at Lower Control Arm)	
First Pass:	160 N.m (118 lb ft)
Final Pass:	90 - 105 degrees
Rear Suspension Lateral Link Inner Bolt	Torque mating fastener
Rear Suspension Lateral Link Outer Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90 - 105 degrees
Rear Suspension Link Outer Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90 - 105 degrees
Rear Suspension Lower Control Arm Outer Bolt	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90 - 105 degrees
Rear Suspension Trailing Arm Bolt (At Body)	
First Pass:	160 N.m (118 lb ft)
Final Pass:	90 - 105 degrees
Rear Suspension Trailing Arm Bolt (At Knuckle)	
First Pass:	160 N.m (118 lb ft)
Final Pass:	60 - 75 degrees

Reusable Threaded Fastener Tightening Specifications

NOTE: <i>All fasteners listed in this table can be reused after removal.</i>	
Application	Specification
	Metric (English)
Rear Shock Absorber Bolt (at Body)	58 N.m (43 lb ft)
Rear Shock Absorber Mount Nut	25 N.m (18 lb ft)
Rear Stabilizer Shaft Bracket Bolt	30 N.m (22 lb ft)
Rear Stabilizer Shaft Link Bolt (at Knuckle)	58 N.m (43 lb ft)
Rear Stabilizer Shaft Link Nut (at Stabilizer Shaft)	58 N.m (43 lb ft)
Rear Suspension Lateral Link Inner Nut	
First Pass:	100 N.m (74 lb ft)
Final Pass:	90 - 105 degrees
Rear Suspension Link Inner Nut	100 N.m (74 lb ft)
Rear Suspension Lower Control Arm Inner Nut	160 N.m (118 lb ft)
Rear Wheel Bearing and Hub Assembly Bolt	

NOTE:

All fasteners listed in this table can be reused after removal.

Application	Specification
	Metric (English)
First Pass:	100 N.m (74 lb ft)
Final Pass:	15 - 30 degrees

ADHESIVES, FLUIDS, LUBRICANTS AND SEALERS

Application	Type of Material	GM Part Number	
		United States	Canada
Knuckle Bearing Pilot Bore	Grease	12345996	10953501
Rear Wheel Bearing and Hub Bolt	Threadlocker	89021297	10953488
Trailing Arm to Knuckle Bolt	Threadlocker	89021297	10953488

REPAIR INSTRUCTIONS**REAR WHEEL BEARING AND HUB REPLACEMENT (AWD)****Removal Procedure**

1. Remove the rear tire and wheel assembly. - [Tire and Wheel Removal and Installation](#)

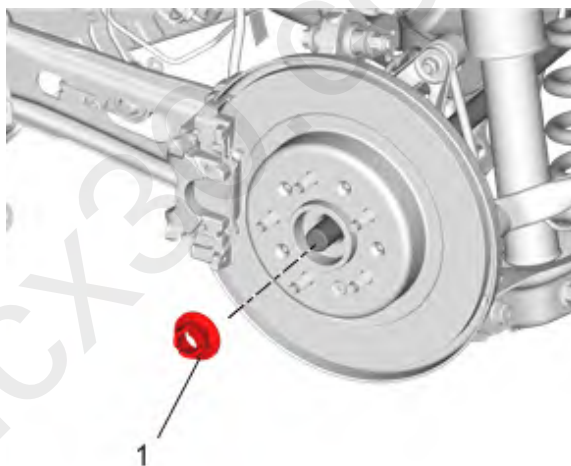


Fig. 1: Wheel Drive Shaft Nut

Courtesy of GENERAL MOTORS COMPANY

2. Remove Wheel Drive Shaft Nut (1) and DISCARD - [Rear Wheel Drive Shaft Replacement - Left Side](#) , or [Rear Wheel Drive Shaft Replacement - Right Side](#)
3. Remove Rear Brake Rotor - [Rear Brake Rotor Replacement](#)

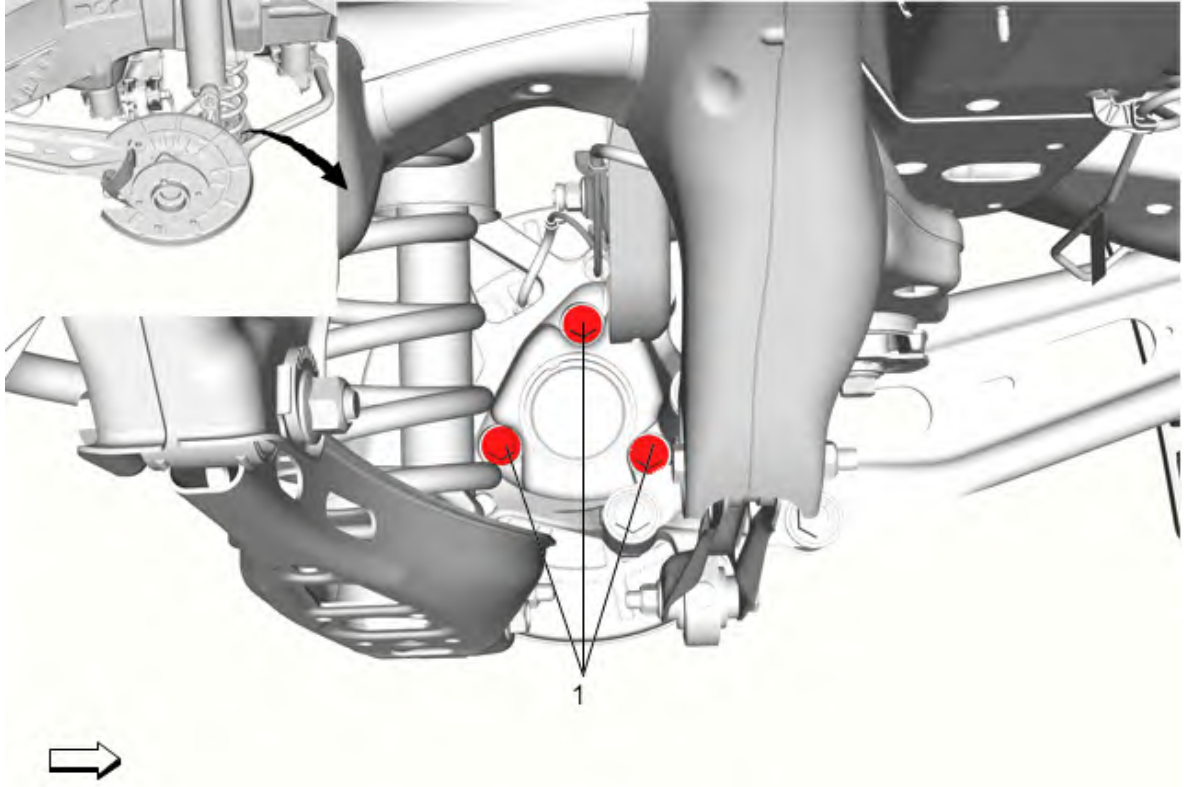


Fig. 2: Rear Wheel Bearing and Hub Assembly Bolts And Knuckle
 Courtesy of GENERAL MOTORS COMPANY

4. Remove Rear Wheel Bearing and Hub Assembly Bolt (1) @ Knuckle - [3x]

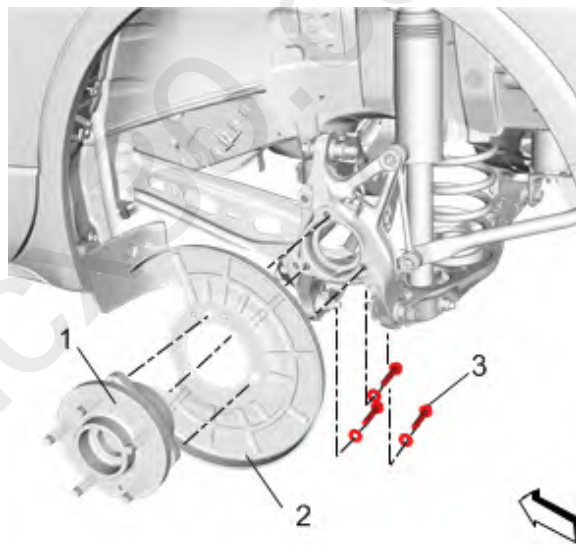


Fig. 3: Rear Wheel Bearing and Hub Assembly
 Courtesy of GENERAL MOTORS COMPANY

5. Remove Rear Wheel Bearing and Hub Assembly (1)

Installation Procedure

NOTE: Avoid applying grease to any other machined surface, holes, or threads. Ensure the drain channel at the bottom of the bore is not blocked with grease or debris.

1. Apply grease evenly and ensure complete coverage to the knuckle bearing pilot bore only. Refer to [Adhesives, Fluids, Lubricants and Sealers](#)

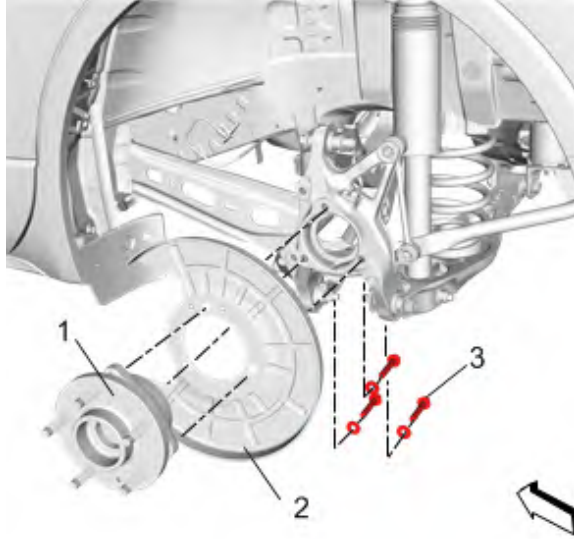


Fig. 4: Rear Wheel Bearing and Hub Assembly
 Courtesy of GENERAL MOTORS COMPANY

2. Install Rear Wheel Bearing and Hub Assembly (2).

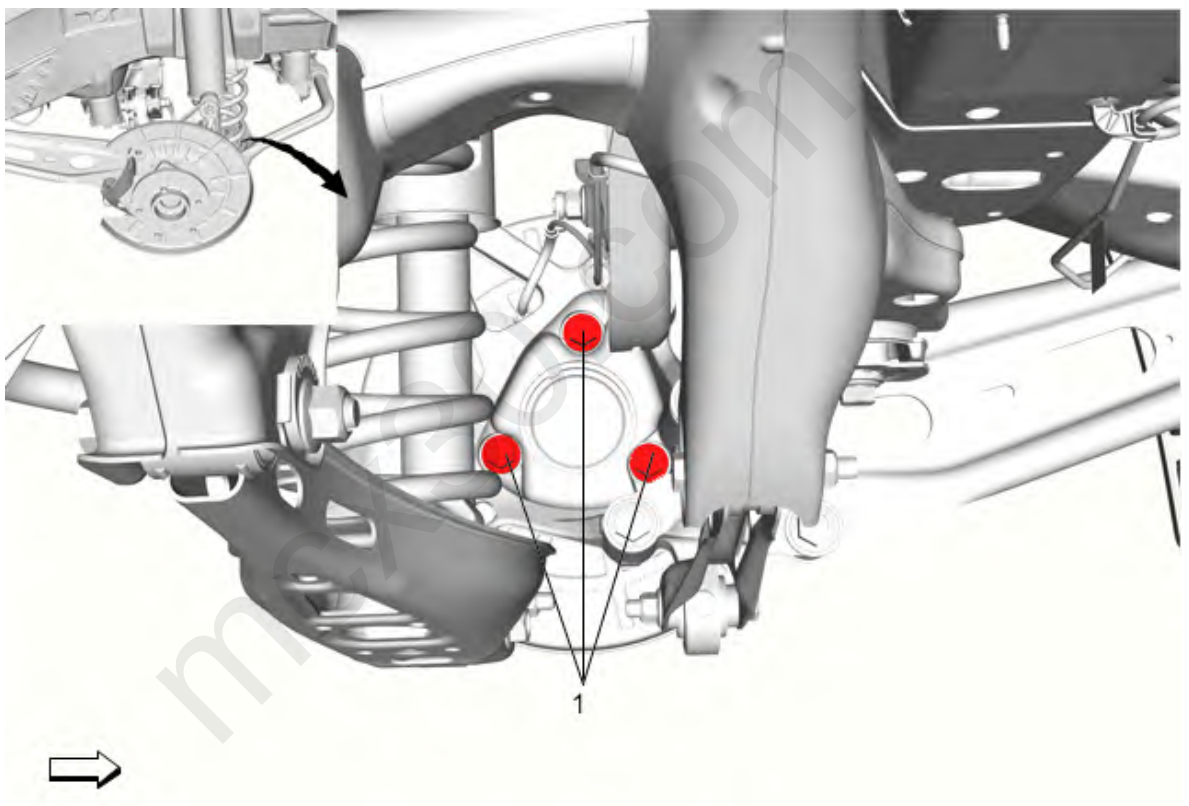


Fig. 5: Rear Wheel Bearing and Hub Assembly Bolts And Knuckle
 Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

3. Install Rear Wheel Bearing and Hub Assembly Bolt (1) @ Knuckle and tighten [3x]

Tighten

- First Pass: 100 N.m (74 lb ft)
- Final Pass: (15 - 30 degrees)

4. Install Rear Brake Rotor - **Rear Brake Rotor Replacement**

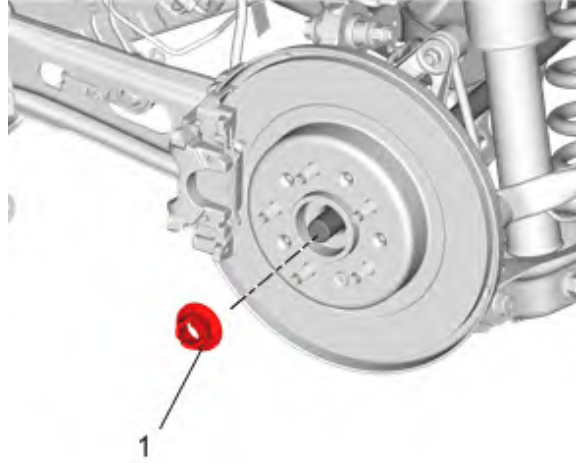


Fig. 6: Wheel Drive Shaft Nut

Courtesy of GENERAL MOTORS COMPANY

5. Install Wheel Drive Shaft Nut (1) - [Rear Wheel Drive Shaft Replacement - Left Side](#) , or [Rear Wheel Drive Shaft Replacement - Right Side](#)
6. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

REAR WHEEL BEARING AND HUB REPLACEMENT (FWD)

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Remove Rear Brake Rotor - [Rear Brake Rotor Replacement](#)

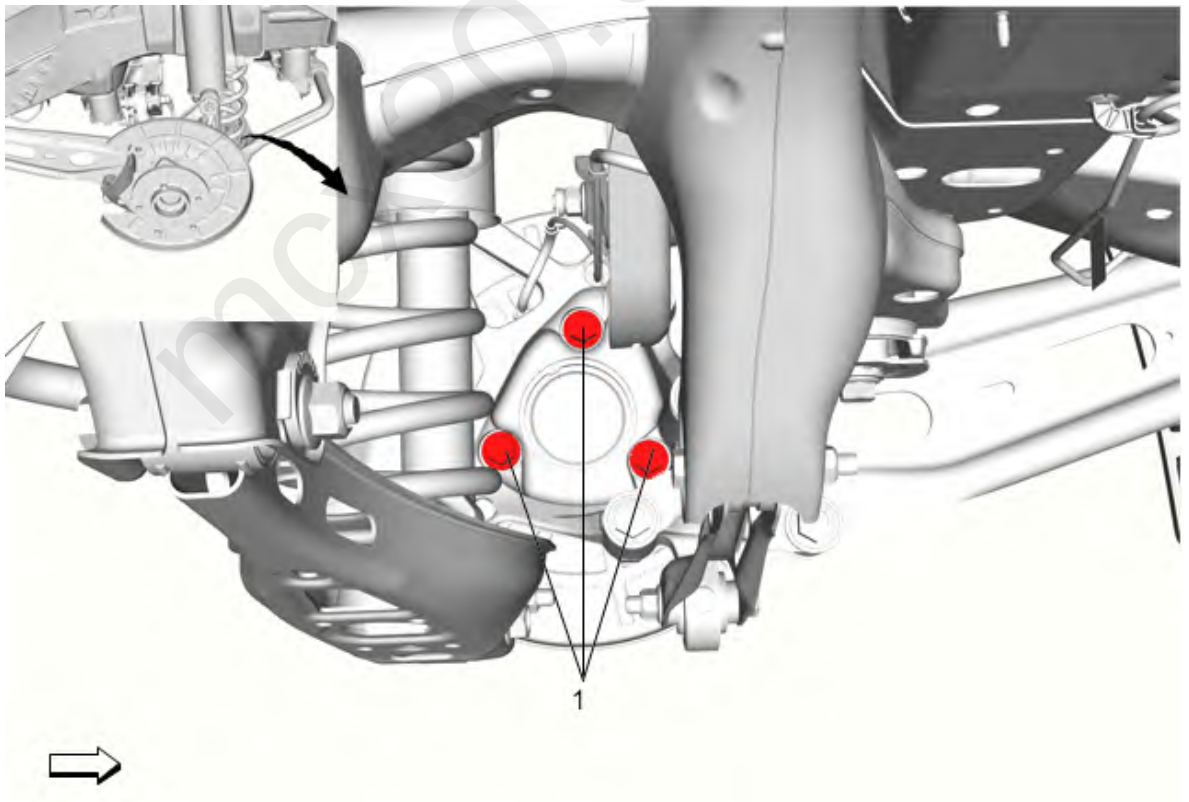


Fig. 7: Rear Wheel Bearing and Hub Assembly Bolts And Knuckle

Courtesy of GENERAL MOTORS COMPANY

3. Remove Rear Wheel Bearing and Hub Assembly Bolt (1) @ Knuckle - [3x]

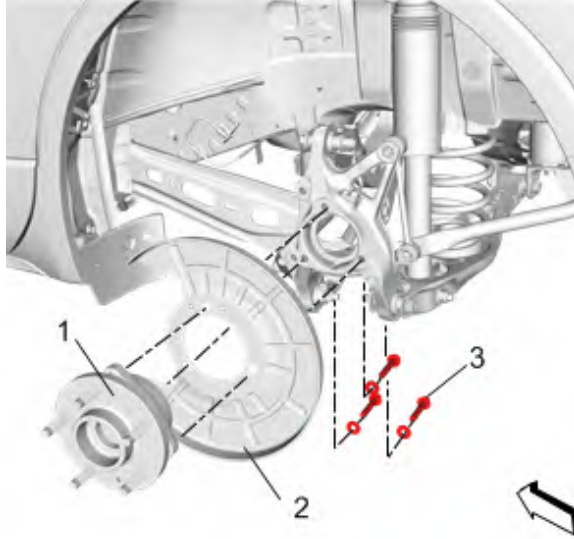


Fig. 8: Rear Wheel Bearing and Hub Assembly

Courtesy of GENERAL MOTORS COMPANY

4. Remove Rear Wheel Bearing and Hub Assembly (1)

Installation Procedure

NOTE: Avoid applying grease to any other machined surface, holes, or threads. Ensure the drain channel at the bottom of the bore is not blocked with grease or debris.

1. Apply grease evenly and ensure complete coverage to the knuckle bearing pilot bore only. Refer to [Adhesives, Fluids, Lubricants and Sealers](#)

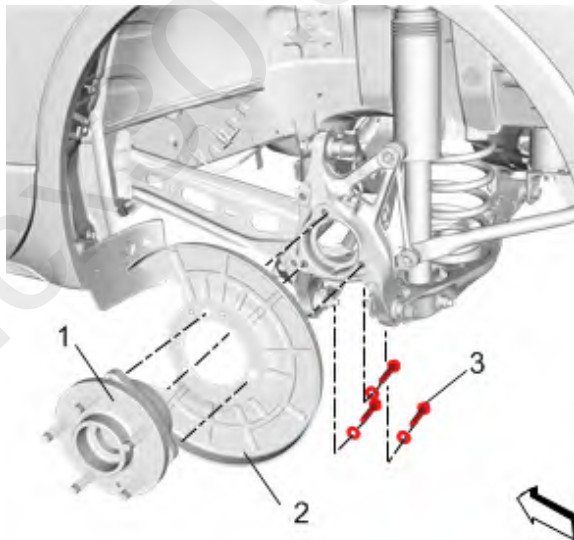


Fig. 9: Rear Wheel Bearing and Hub Assembly

Courtesy of GENERAL MOTORS COMPANY

2. Install Rear Wheel Bearing and Hub Assembly (1).

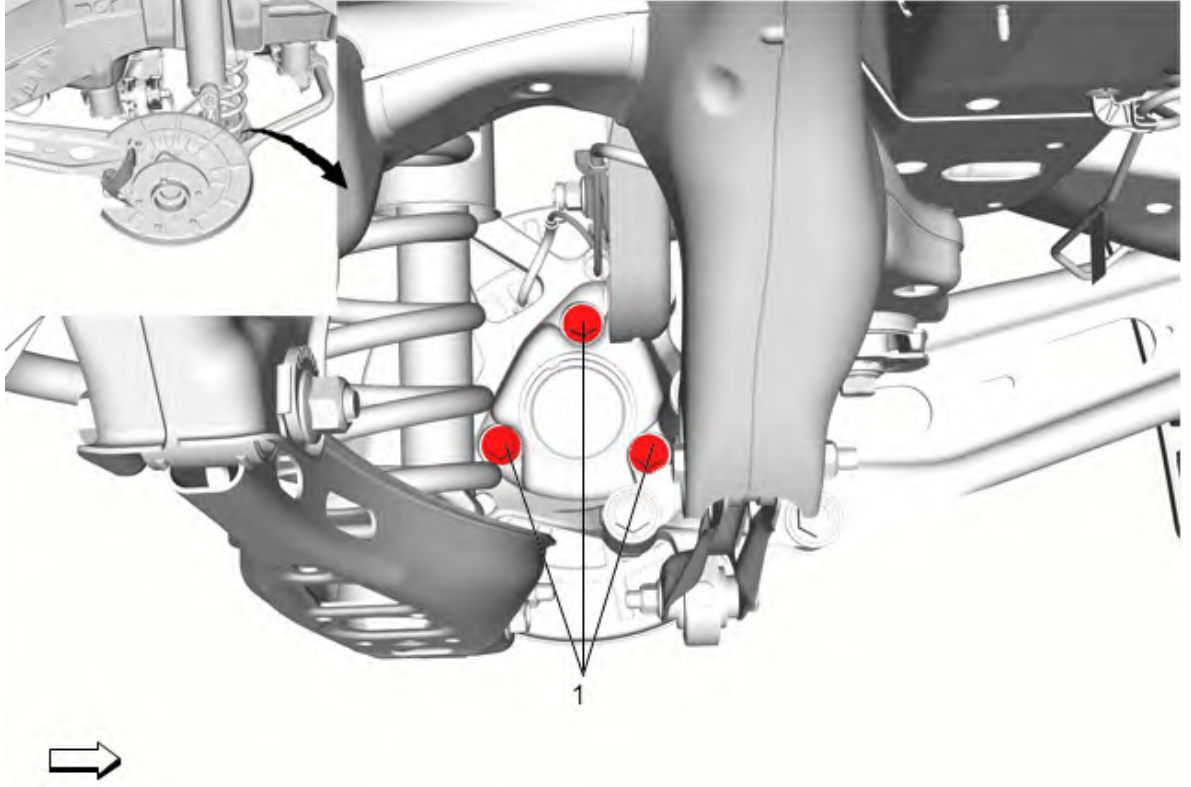


Fig. 10: Rear Wheel Bearing and Hub Assembly Bolts And Knuckle
 Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

3. Install Rear Wheel Bearing and Hub Assembly Bolt (1) @ Knuckle [3x]

Tighten

- First Pass: 100 N.m (74 lb ft)
 - Final Pass: (15 - 30 degrees)
4. Install Rear Brake Rotor - **Rear Brake Rotor Replacement**
 5. Install the rear tire and wheel assembly. **Tire and Wheel Removal and Installation**

REAR WHEEL BEARING DIRT DEFLECTOR REPLACEMENT

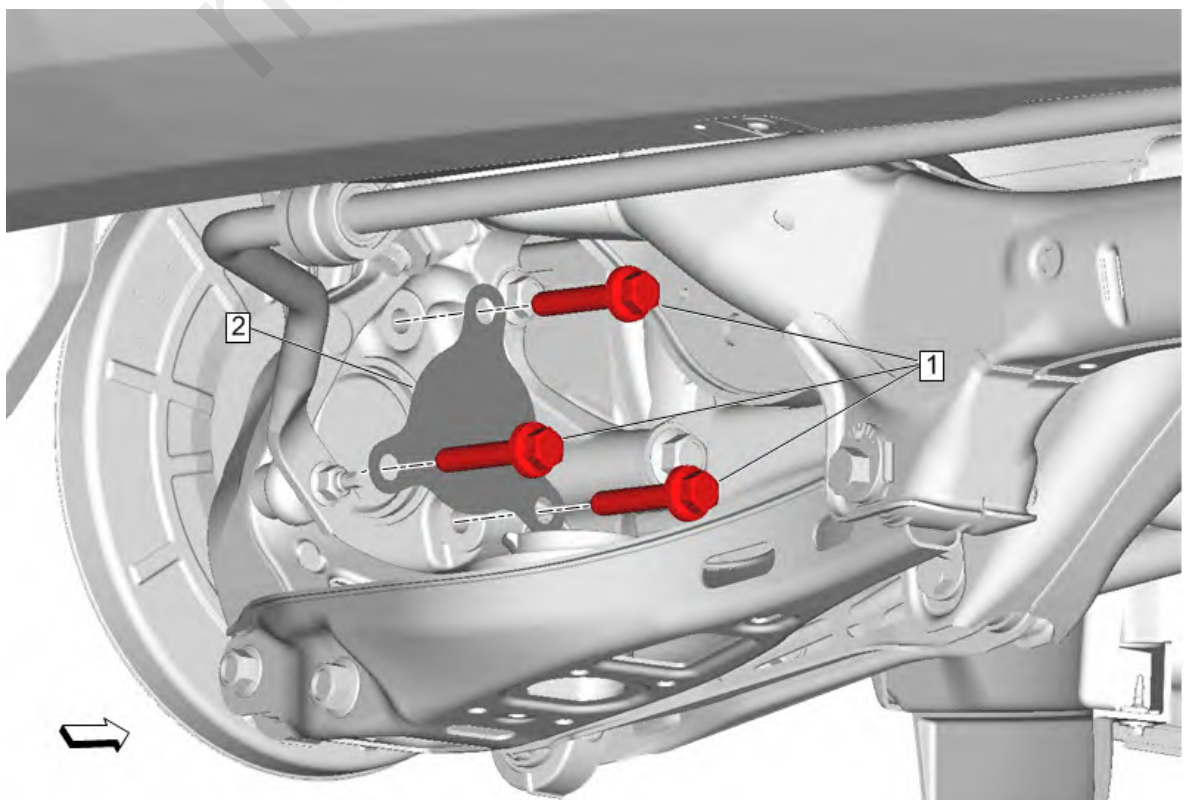


Fig. 11: Rear Wheel Bearing Dirt Deflector
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
1. Remove the rear tire and wheel assembly. Tire and Wheel Removal and Installation	
1	Rear Wheel Bearing and Hub Assembly Bolt [3x] CAUTION: Refer to Fastener Caution . Tighten • First Pass: 100 N.m (74 lb ft) • Final Pass: 15-30 degrees
2	Rear Wheel Bearing Dirt Deflector

KNUCKLE REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. [Tire and Wheel Removal and Installation](#)

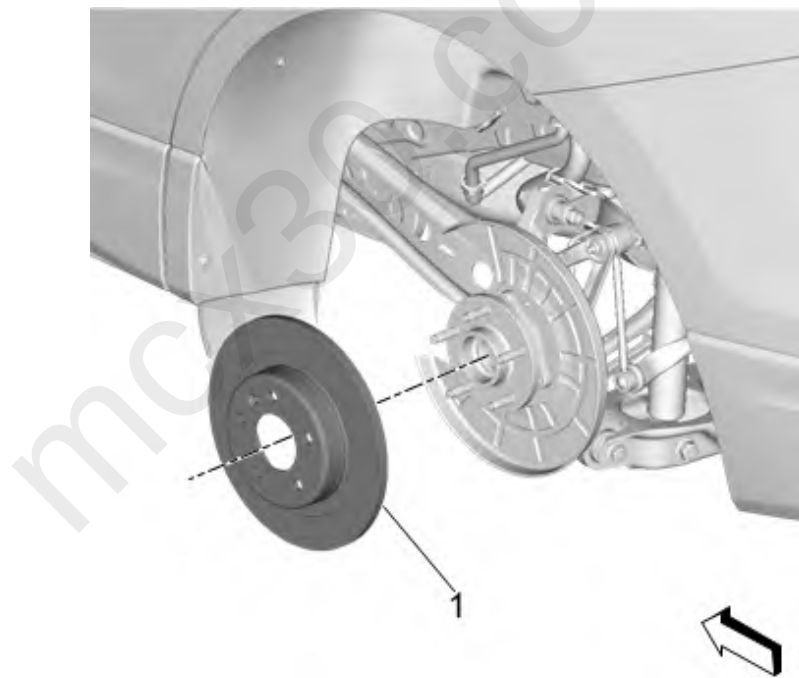


Fig. 12: Rear Brake Rotor
 Courtesy of GENERAL MOTORS COMPANY

2. Remove Rear Brake Rotor (1) - [Rear Brake Rotor Replacement](#)
3. Remove Rear Wheel Speed Sensor @ Knuckle - [Rear Wheel Speed Sensor Replacement](#)

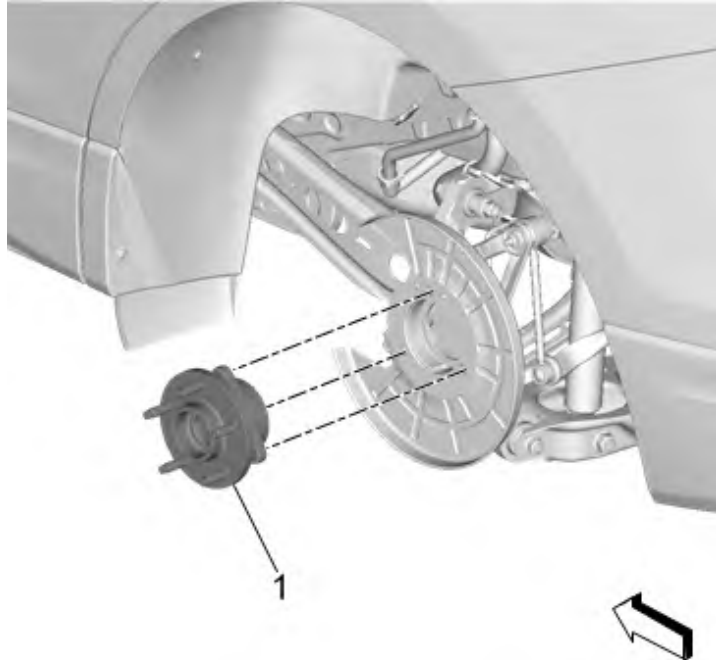


Fig. 13: Rear Wheel Bearing and Hub Assembly
Courtesy of GENERAL MOTORS COMPANY

4. Remove Rear Wheel Bearing and Hub Assembly (1) - [Rear Wheel Bearing and Hub Replacement \(AWD\)](#)[Rear Wheel Bearing and Hub Replacement \(FWD\)](#)

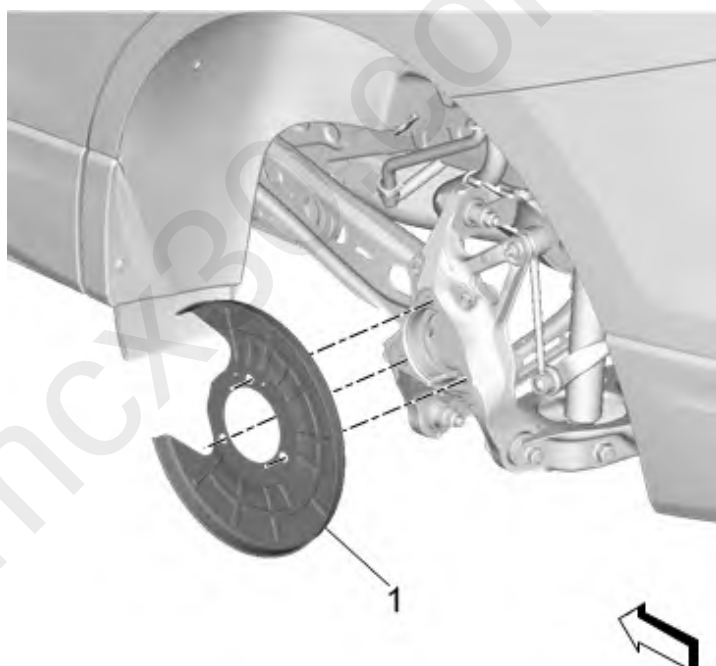


Fig. 14: Rear Brake Shield
Courtesy of GENERAL MOTORS COMPANY

5. Remove Rear Brake Shield (1) - [Rear Brake Shield Replacement](#)

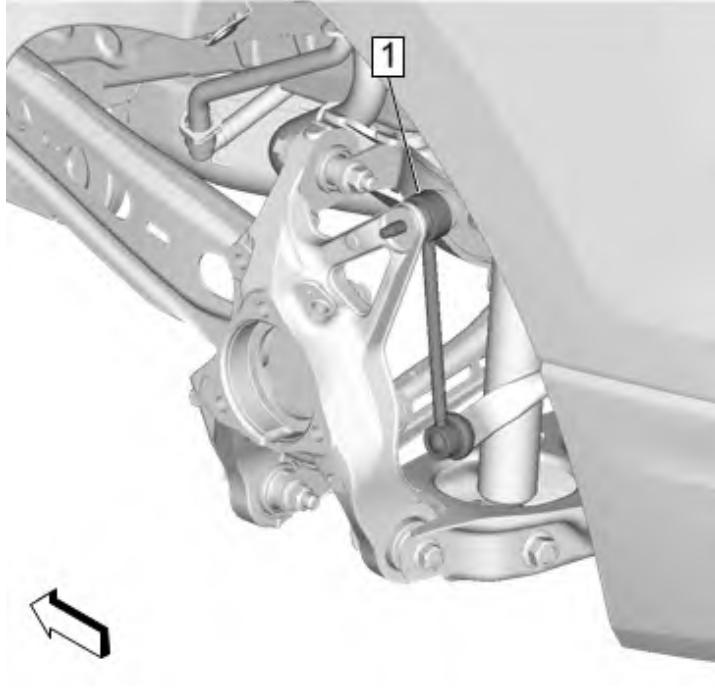


Fig. 15: Stabilizer Shaft Link

Courtesy of GENERAL MOTORS COMPANY

6. Separate Stabilizer Shaft Link (1) @ Knuckle - [Stabilizer Shaft Link Replacement](#)

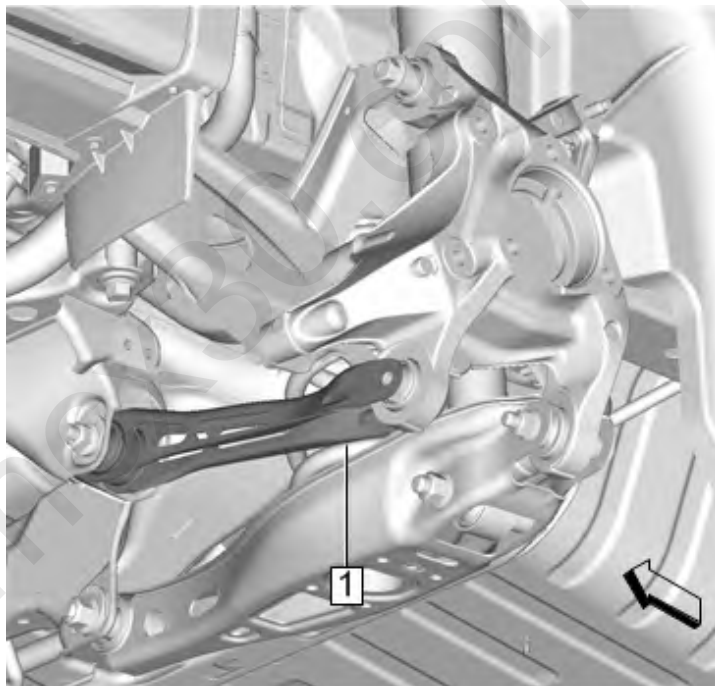


Fig. 16: Rear Suspension Adjust Link

Courtesy of GENERAL MOTORS COMPANY

7. Separate Rear Suspension Adjust Link (1) @ Knuckle - [Adjust Link Replacement](#)

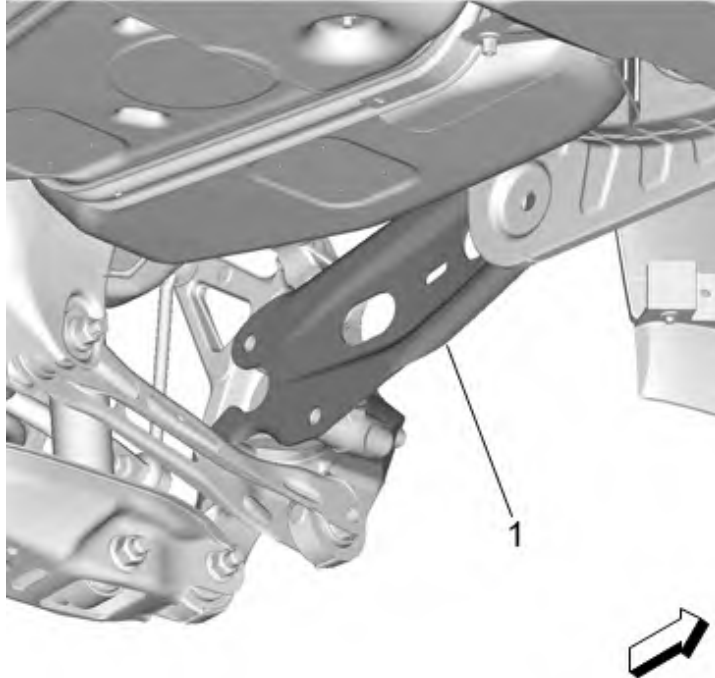


Fig. 17: Rear Suspension Trailing Arm
Courtesy of GENERAL MOTORS COMPANY

8. Separate Rear Suspension Trailing Arm (1) @ Knuckle - **Trailing Arm Replacement**
9. Separate Rear Suspension Lower Control Arm (1) @ Knuckle - **Lower Control Arm Replacement**

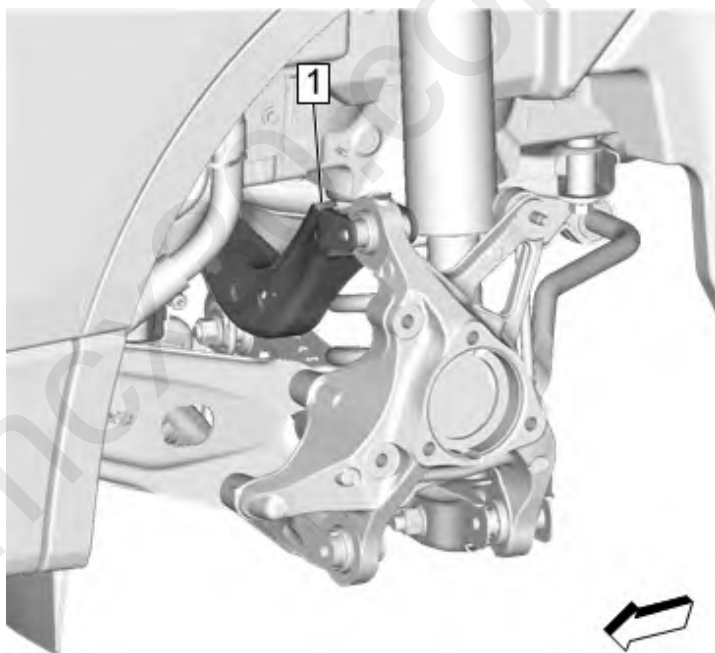


Fig. 18: Rear Suspension Upper Lateral Link
Courtesy of GENERAL MOTORS COMPANY

10. Separate Rear Suspension Upper Lateral Link (1) @ Knuckle - **Rear Suspension Upper Lateral Link Replacement**

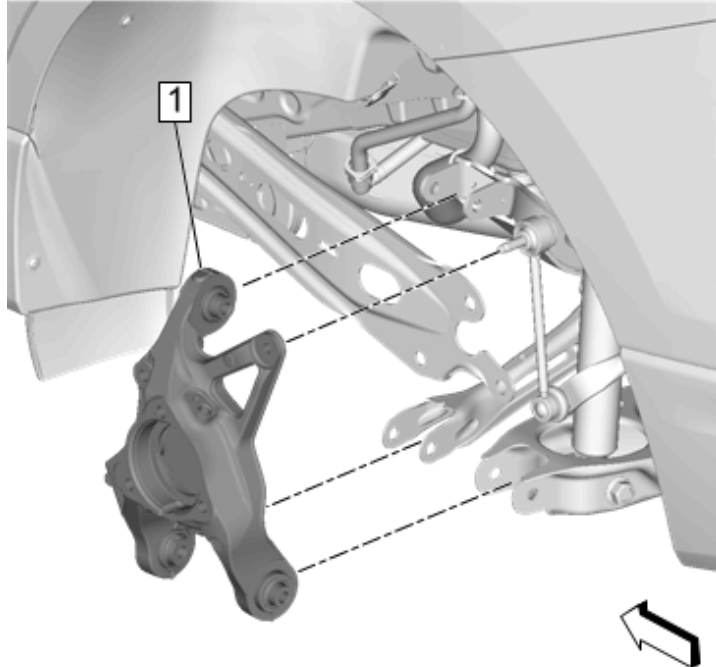


Fig. 19: Knuckle

Courtesy of GENERAL MOTORS COMPANY

11. Remove Knuckle (1)

Installation Procedure

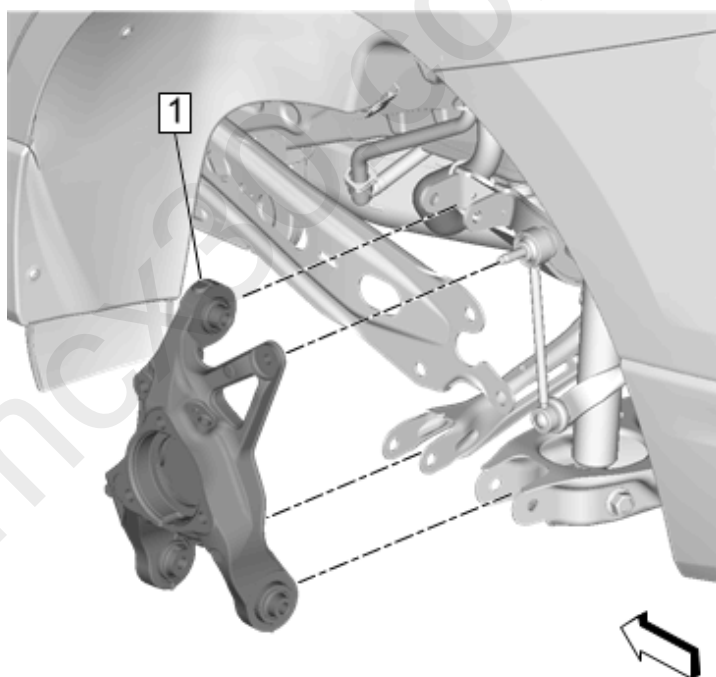


Fig. 20: Knuckle

Courtesy of GENERAL MOTORS COMPANY

1. Install Knuckle (1)

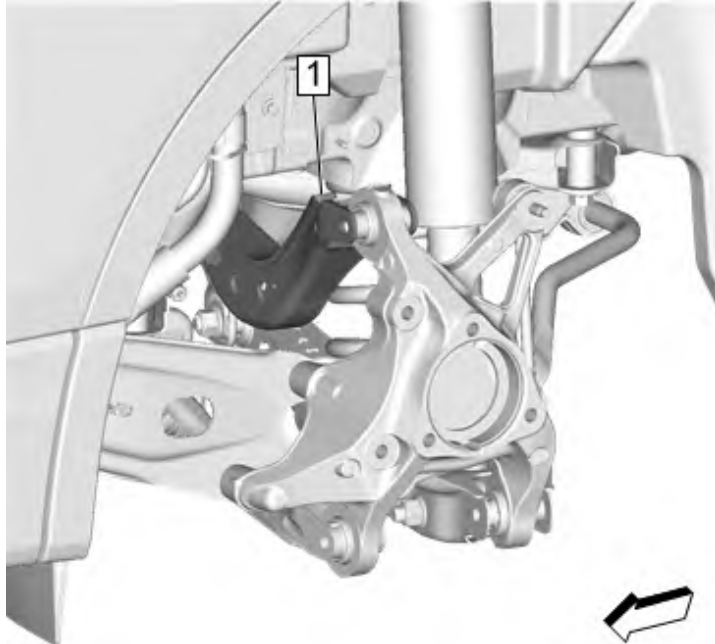


Fig. 21: Rear Suspension Upper Lateral Link
 Courtesy of GENERAL MOTORS COMPANY

2. Install Rear Suspension Upper Lateral Link (1) @ Knuckle - [Rear Suspension Upper Lateral Link Replacement](#)

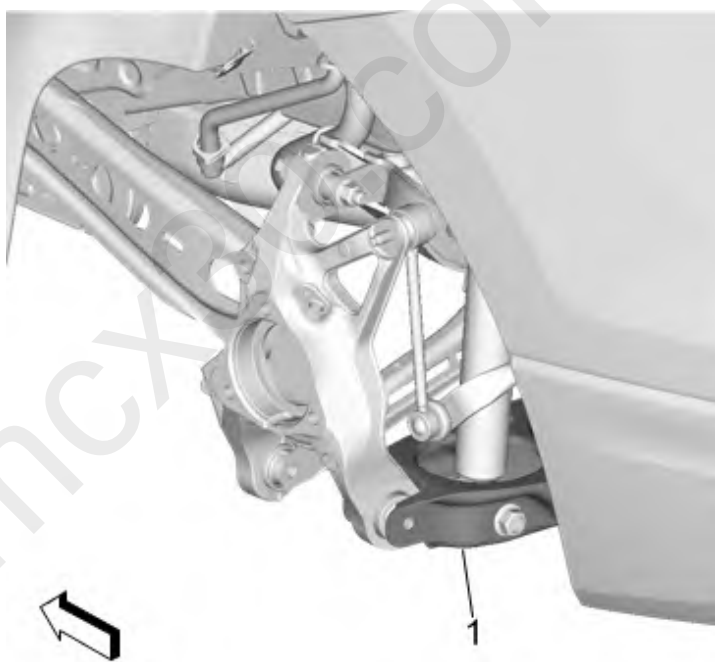


Fig. 22: Rear Suspension Lower Control Arm
 Courtesy of GENERAL MOTORS COMPANY

3. Install Rear Suspension Lower Control Arm (1) @ Knuckle - [Lower Control Arm Replacement](#)
4. Install Rear Suspension Trailing Arm (1) @ Knuckle - [Trailing Arm Replacement](#)

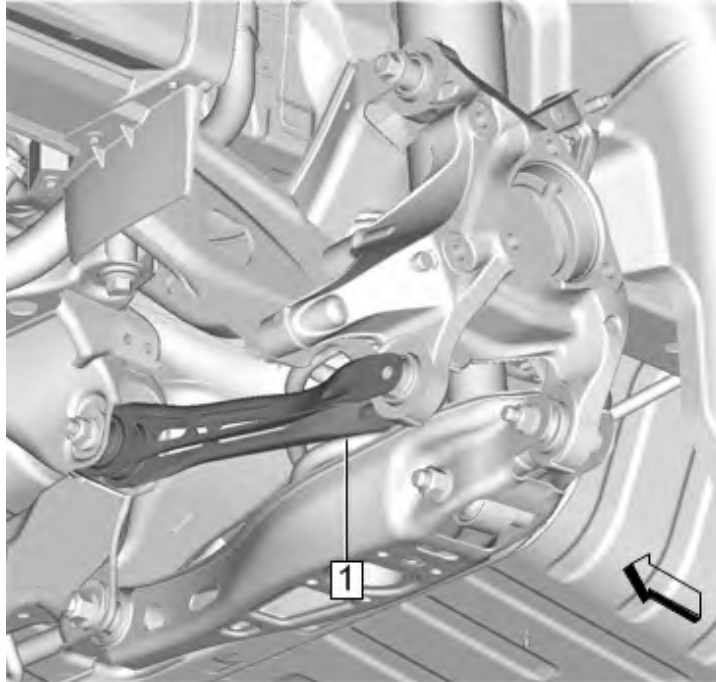


Fig. 23: Rear Suspension Adjust Link
Courtesy of GENERAL MOTORS COMPANY

5. Install Rear Suspension Adjust Link (1) @ Knuckle - [Adjust Link Replacement](#)

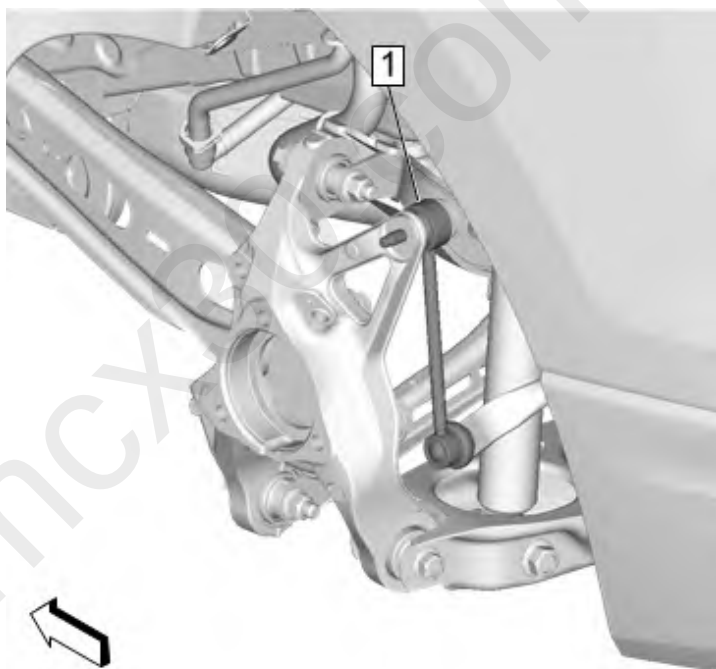


Fig. 24: Stabilizer Shaft Link
Courtesy of GENERAL MOTORS COMPANY

6. Install Stabilizer Shaft Link (1) @ Knuckle - [Stabilizer Shaft Link Replacement](#)

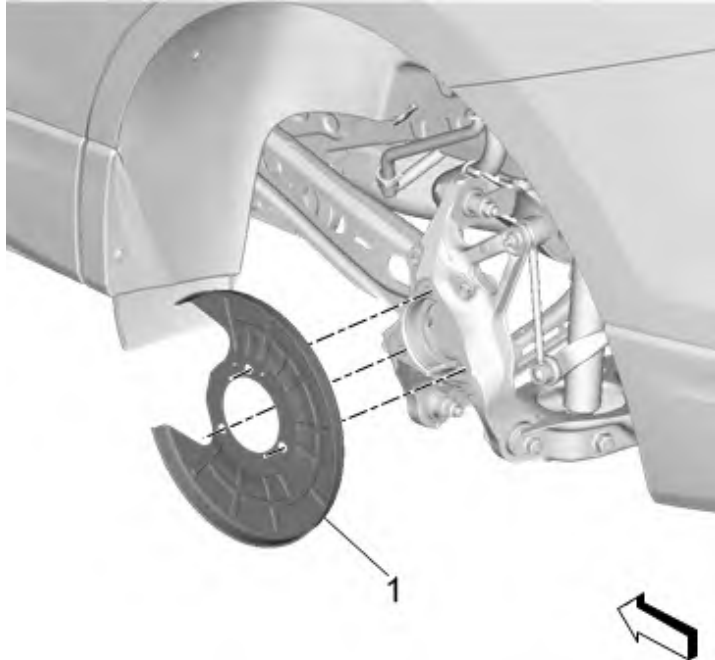


Fig. 25: Rear Brake Shield

Courtesy of GENERAL MOTORS COMPANY

7. Install Rear Brake Shield (1) - [Rear Brake Shield Replacement](#)

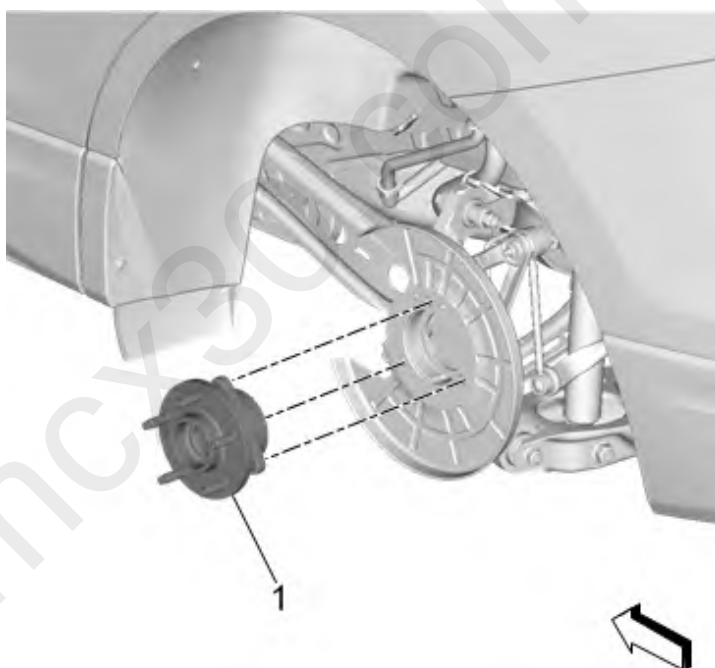


Fig. 26: Rear Wheel Bearing and Hub Assembly

Courtesy of GENERAL MOTORS COMPANY

8. Install Rear Wheel Bearing and Hub Assembly (1) - [Rear Wheel Bearing and Hub Replacement \(AWD\)](#)[Rear Wheel Bearing and Hub Replacement \(FWD\)](#)
9. Install Rear Wheel Speed Sensor @ Knuckle - [Rear Wheel Speed Sensor Replacement](#)

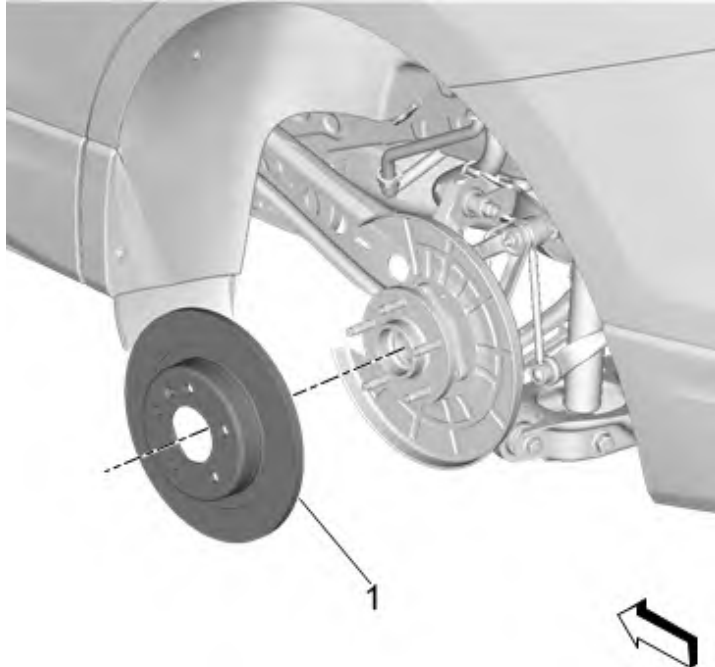


Fig. 27: Rear Brake Rotor

Courtesy of GENERAL MOTORS COMPANY

10. Install Rear Brake Rotor (1) - [Rear Brake Rotor Replacement](#)
11. Install the rear tire and wheel assembly. [Tire and Wheel Removal and Installation](#)

STABILIZER SHAFT REPLACEMENT

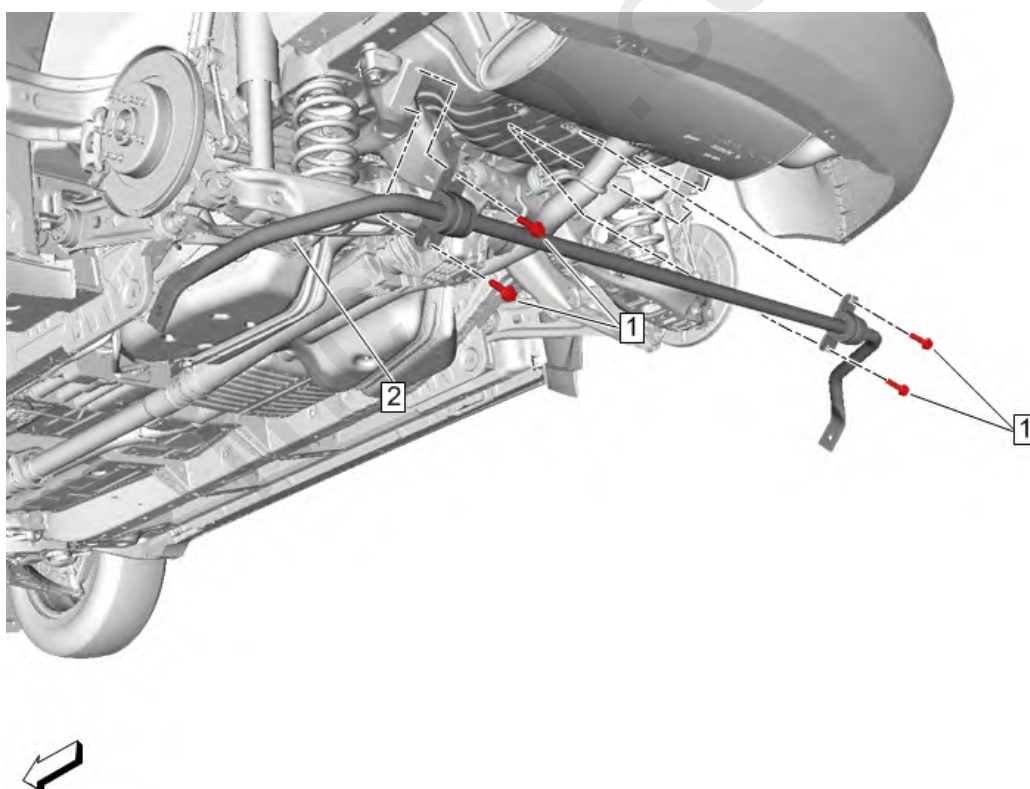


Fig. 28: Stabilizer Shaft

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure	
Lifting and Jacking the Vehicle	
Tire and Wheel Removal and Installation	
Disconnect Rear Stabilizer Shaft Link@Rear Stabilizer Shaft Stabilizer Shaft Link Replacement	

Callout	Component Name
1	Rear Stabilizer Shaft Bracket Bolt [4x] CAUTION: Refer to Fastener Caution . Tighten 30 N.m (22 lb ft)
2	Rear Stabilizer Shaft NOTE: The rear stabilizer shaft insulators and rear stabilizer shaft brackets are not serviceable.

STABILIZER SHAFT LINK REPLACEMENT

Removal Procedure

1. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#)

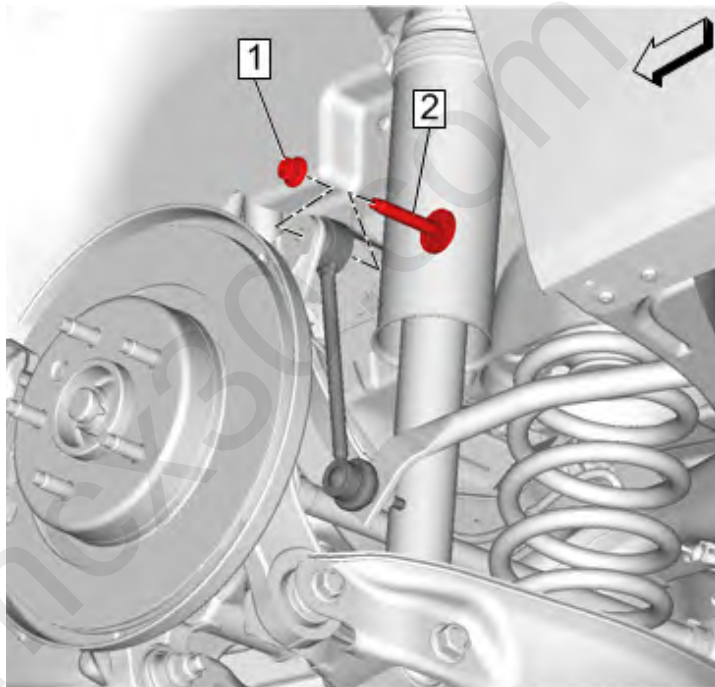


Fig. 29: Stabilizer Shaft Link Nut, Bolt

Courtesy of GENERAL MOTORS COMPANY

NOTE: The tire and wheel assembly is removed for illustration purposes only.

2. Remove Stabilizer Shaft Link Nut (1) @ Knuckle
3. Remove Stabilizer Shaft Link Bolt (2) @ Knuckle

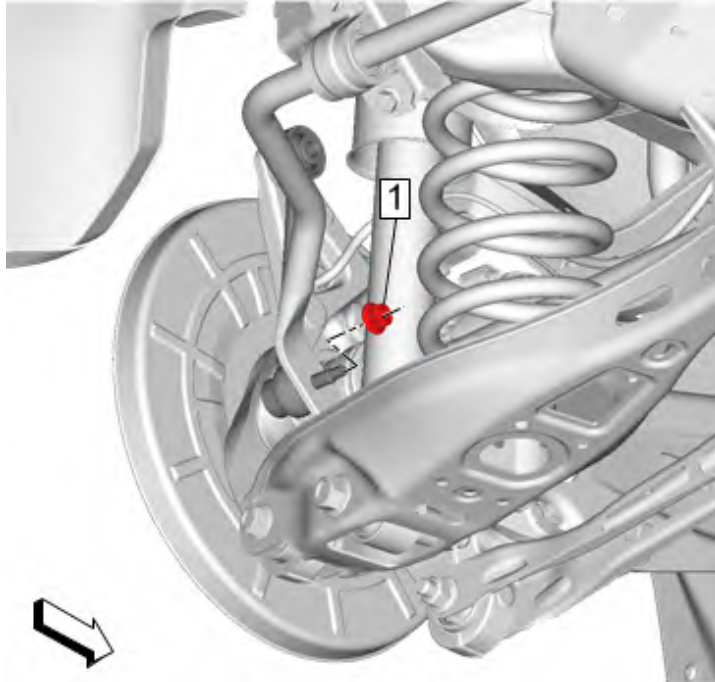


Fig. 30: Stabilizer Shaft Link Nut
 Courtesy of GENERAL MOTORS COMPANY

4. Remove Stabilizer Shaft Link Nut (1) @ Stabilizer Shaft

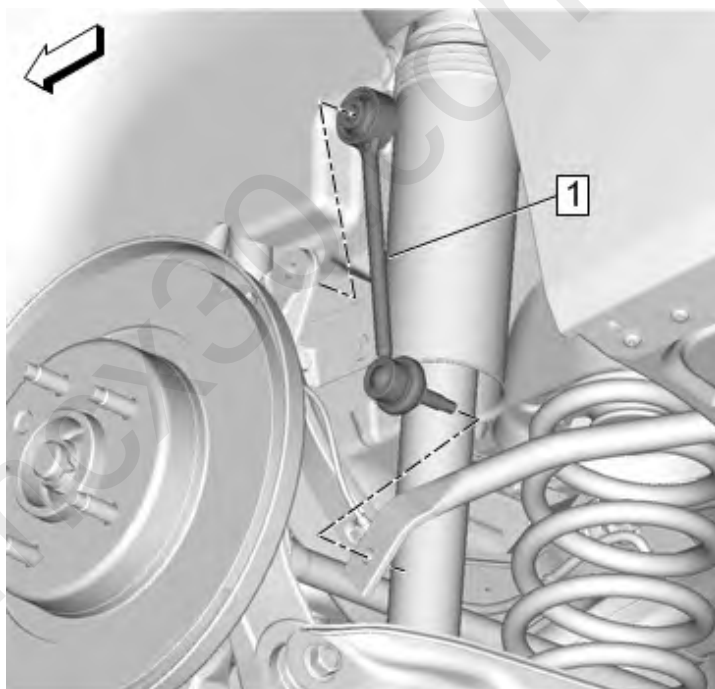


Fig. 31: Stabilizer Shaft Link
 Courtesy of GENERAL MOTORS COMPANY

5. Remove Stabilizer Shaft Link (1)

Installation Procedure

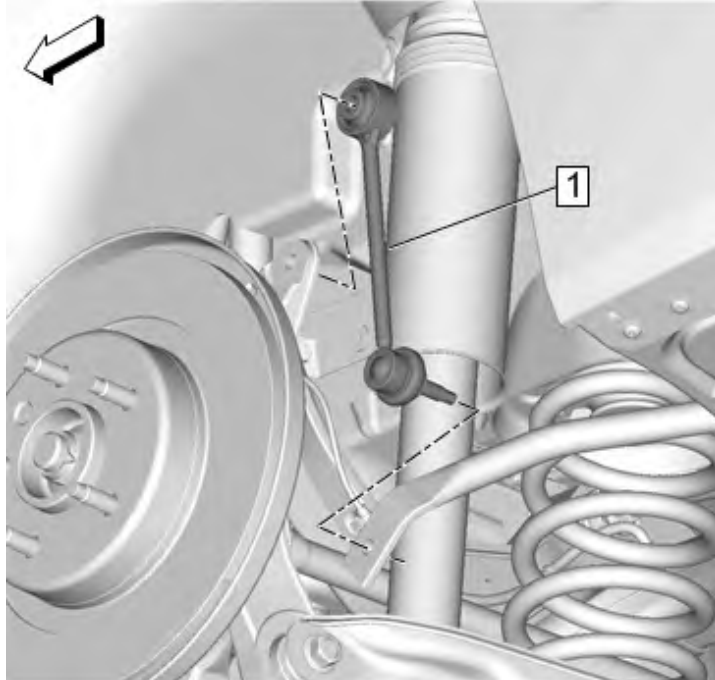


Fig. 32: Stabilizer Shaft Link

Courtesy of GENERAL MOTORS COMPANY

1. Install Stabilizer Shaft Link (1)

CAUTION: Refer to [Fastener Caution](#) .

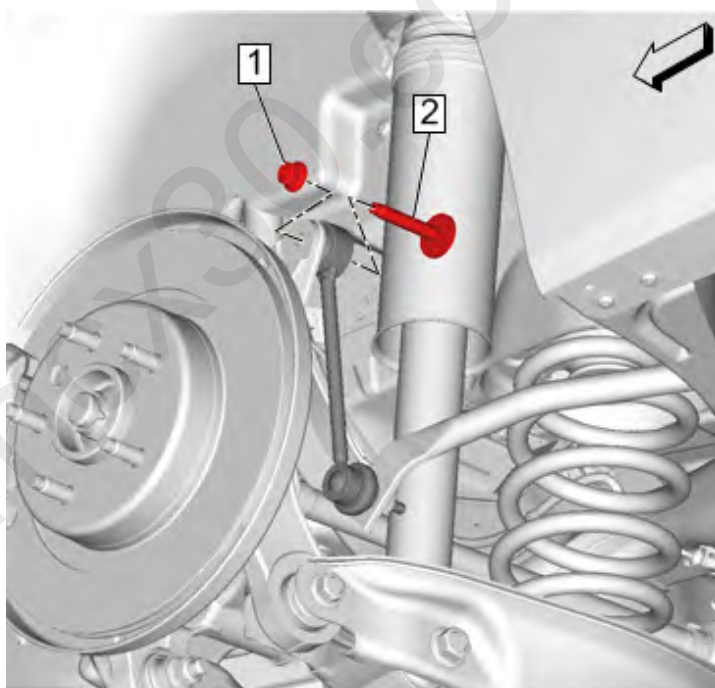


Fig. 33: Stabilizer Shaft Link Nut, Bolt

Courtesy of GENERAL MOTORS COMPANY

2. Install Stabilizer Shaft Link Bolt (2) @ Knuckle
3. Install Stabilizer Shaft Link Nut (1) @ Knuckle
4. Stabilizer Shaft Link Bolt (2) @ Knuckle - Tighten 58 N.m (43 lb ft)

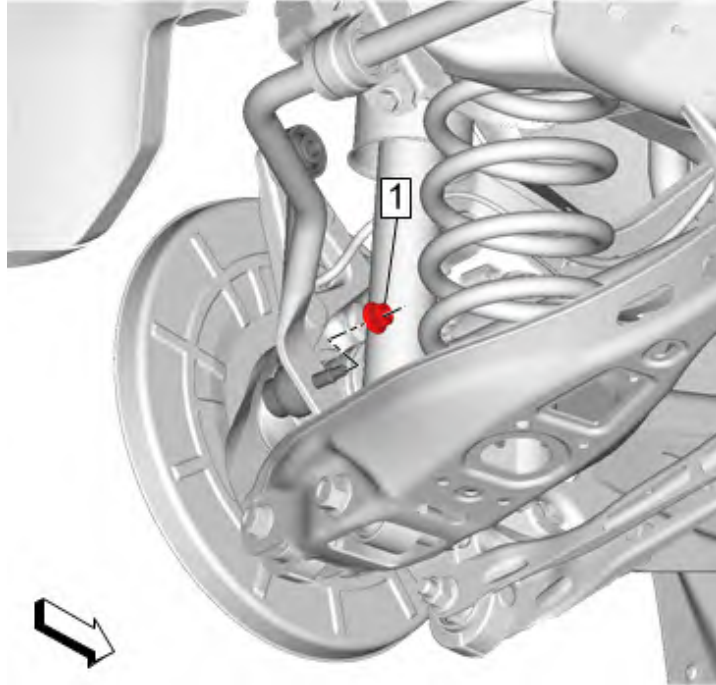


Fig. 34: Stabilizer Shaft Link Nut
 Courtesy of GENERAL MOTORS COMPANY

5. Install Stabilizer Shaft Link Nut (1) @ Stabilizer Shaft and tighten 58 N.m (43 lb ft)
6. Lower the vehicle.

STRUT AND SHOCK ABSORBER INSPECTION

NOTE: The shock absorber assembly **DOES NOT** have to be removed from the vehicle to perform the following inspection procedure.

NOTE: A light film of oil on the top portion of the lower shock absorber tube is normal. **DO NOT** replace the shock absorber for this condition.

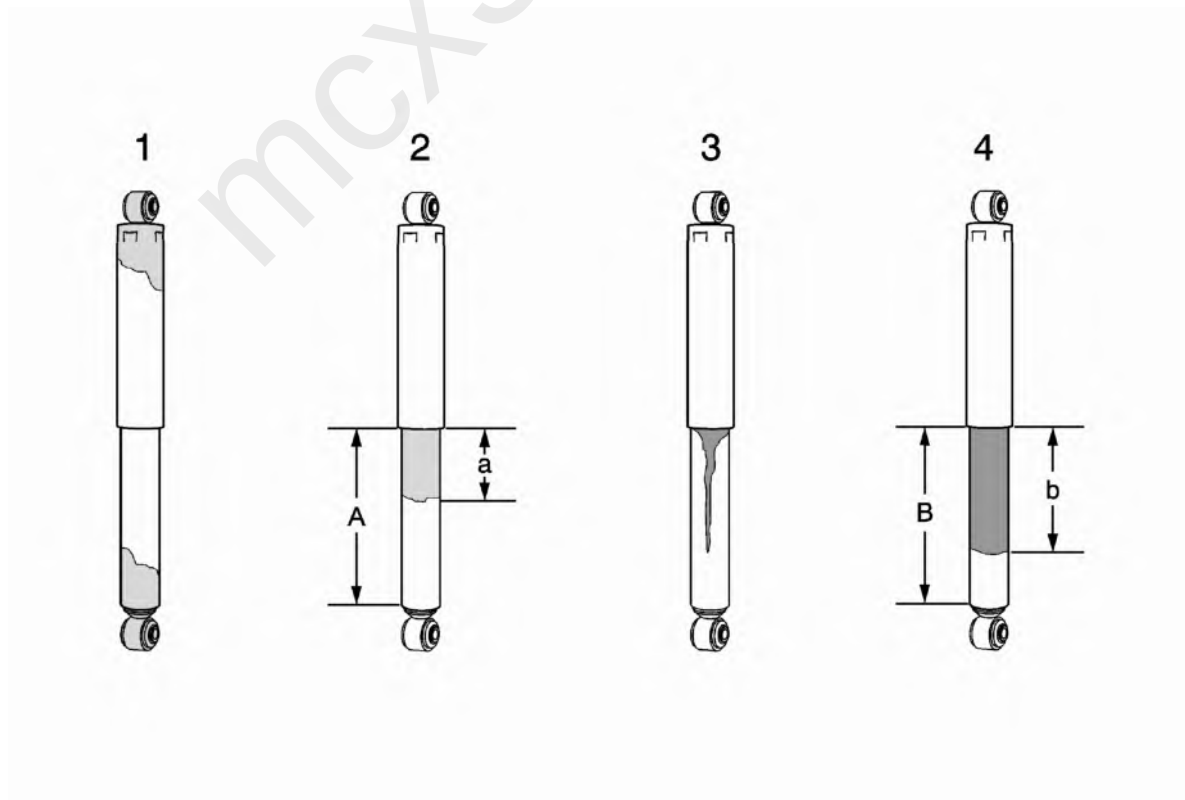


Fig. 35: Identifying Shock Absorber Conditions
 Courtesy of GENERAL MOTORS COMPANY

Condition 1

Oil or fluid residue only on the bottom or top of the shock absorber and not originating from the shaft seal, is not a shock absorber related problem. DO NOT replace the shock absorber, look for other external leaks.

Condition 2

Light film/residue on approximately 1/3 (a) or less of the lower shock tube (A) and originating from the shaft seal, is a NORMAL condition. DO NOT replace the shock absorber.

Condition 3

Oil drip or trail down the lower shock tube and originating from the shaft seal, is an ABNORMAL condition. Replace the shock absorber.

Condition 4

An extreme wet film of oil covering more than 1/3 (b) of the lower shock tube and originating from the shaft seal (B), is an ABNORMAL condition. Replace the shock absorber. Refer to [Shock Absorber Replacement](#).

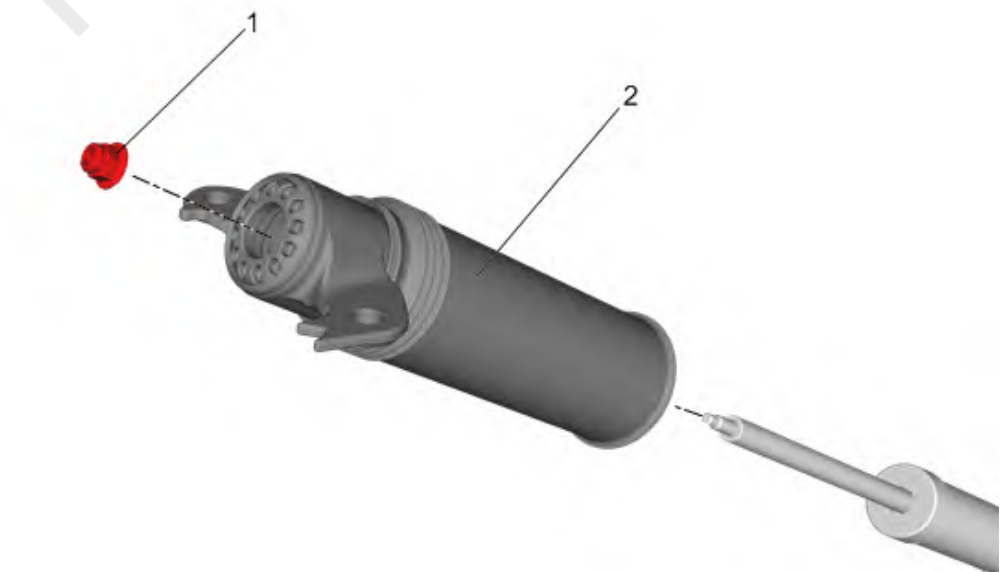
Inspection

1. Verify the customer's concern is present. If the concern is present, continue to the next step. If the concern is not present, then the vehicle is operating normally.

NOTE: The shock absorber assembly DOES NOT have to be removed from the vehicle to perform the following inspection procedure.

2. Raise and support the vehicle. Refer to [Lifting and Jacking the Vehicle](#).
3. Visually inspect each of the shock absorbers for external fluid leaks. Refer to the following conditions 1, 2, 3 and 4 for visual inspection.
 - If conditions 1 or 2 are found, continue to step 4.
 - If conditions 3 or 4 are found, replace shock absorber. Refer to [Shock Absorber Replacement](#).
4. If equipped with electronic suspension control system, ensure that the system is working properly. Refer to Diagnostic Starting Point - Electronic Suspension Control.
5. Use your hands in order to lift up and push down on each corner of the vehicle 3 times. Remove your hands from the vehicle. If the corner motion exceeds 2 cycles, replace the shock absorber. If the shock absorber does not exceed 2 cycles, NO repair is necessary.

REAR SHOCK ABSORBER MOUNT REPLACEMENT



Callout	Component Name
Preliminary Procedure Shock Absorber Replacement.	
1	Rear Shock Absorber Mount Nut CAUTION: Refer to <u>Fastener Caution</u> . Tighten 25 N.m (18 lb ft)
2	Rear Shock Absorber Upper Mount

SHOCK ABSORBER REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Remove Rear Wheelhouse Liner - [Rear Wheelhouse Liner Replacement - Right Side \(Terrain\)](#), [Rear Wheelhouse Liner Replacement - Right Side \(Equinox\)](#) , or [Rear Wheelhouse Liner Replacement- Left Side \(Equinox\)](#), [Rear Wheelhouse Liner Replacement- Left Side \(Terrain\)](#).
3. Support the lower control arm with a tall jack stand.

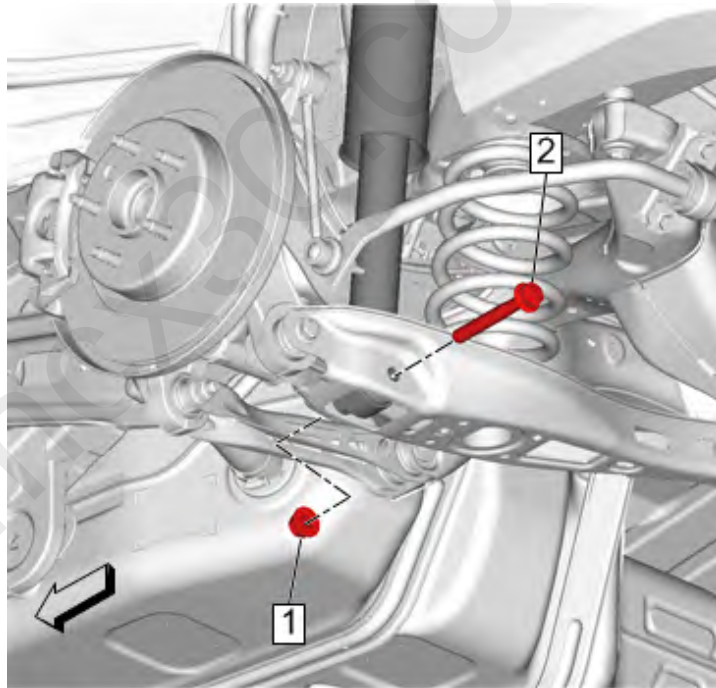


Fig. 37: Rear Shock Absorber Nut, Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Remove Rear Shock Absorber Nut (1) @ Lower Control Arm
5. Remove Rear Shock Absorber Bolt (2) @ Lower Control Arm and DISCARD

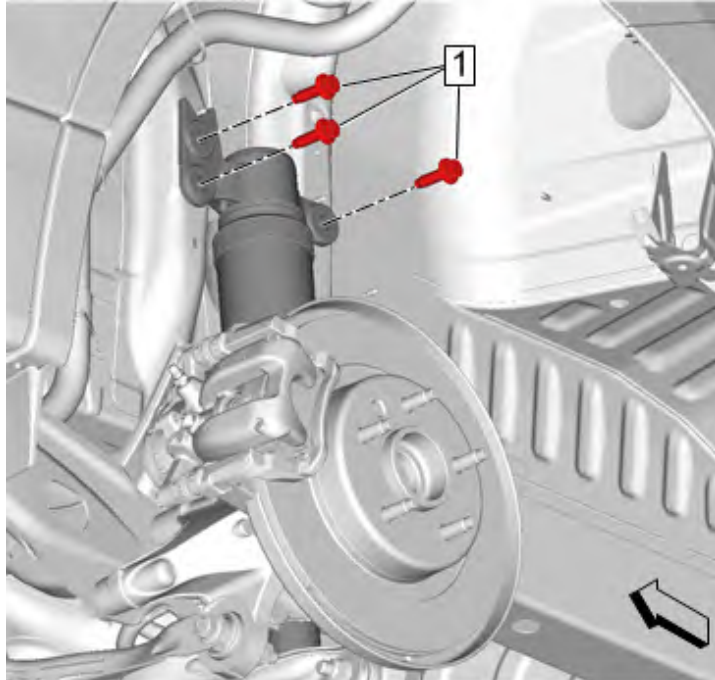


Fig. 38: Rear Shock Absorber Bolt
 Courtesy of GENERAL MOTORS COMPANY

6. Remove Rear Shock Absorber Bolt @ Body (1) [3x]

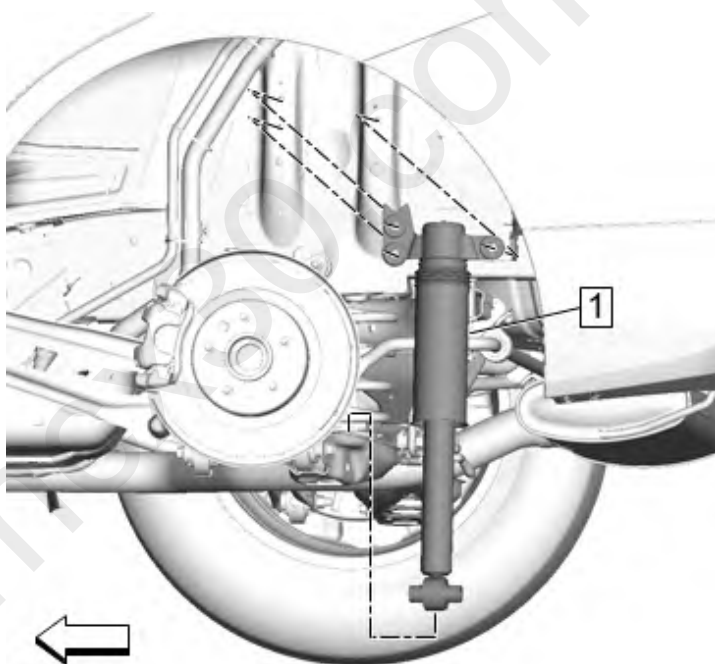


Fig. 39: Rear Shock Absorber
 Courtesy of GENERAL MOTORS COMPANY

7. Remove Rear Shock Absorber (1)

Installation Procedure

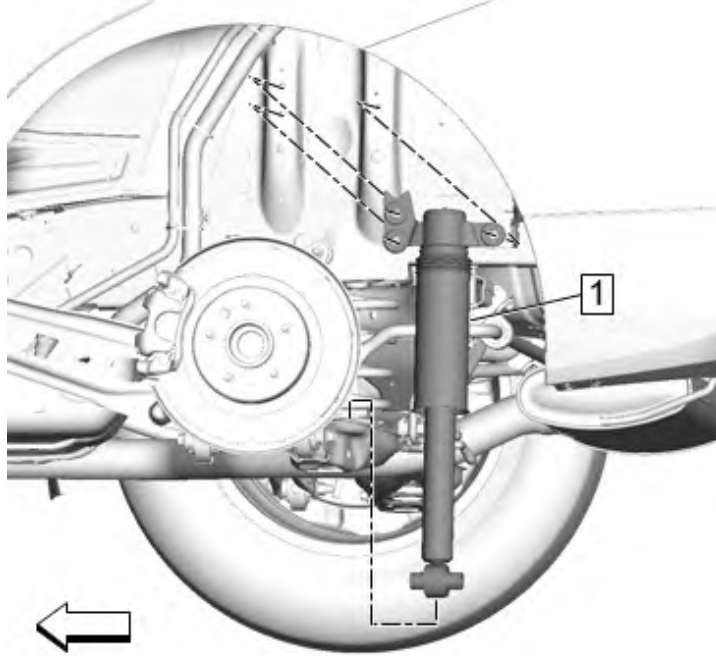


Fig. 40: Rear Shock Absorber

Courtesy of GENERAL MOTORS COMPANY

1. Install Rear Shock Absorber (1)

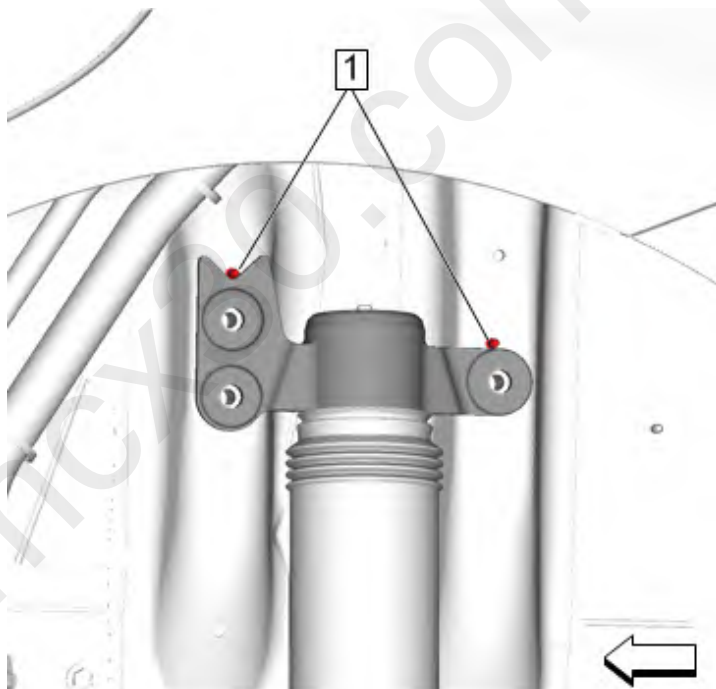


Fig. 41: Locator Pins

Courtesy of GENERAL MOTORS COMPANY

2. Inspect the condition of the locator pins (1). If the pins are bent upward or blocking the bolting surface, the pins should be removed and the surface ground flat.
3. Ensure that the shock absorber is seated against the locator pins (1).

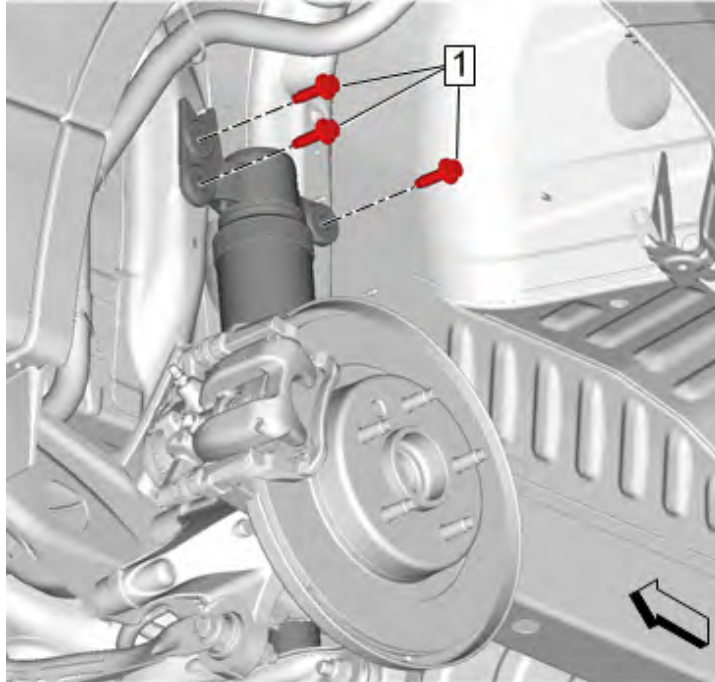


Fig. 42: Rear Shock Absorber Bolt

Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to **Fastener Caution** .

4. Install Rear Shock Absorber Bolt @ Body (1) and tighten [3x] 58 N.m (43 lb ft)

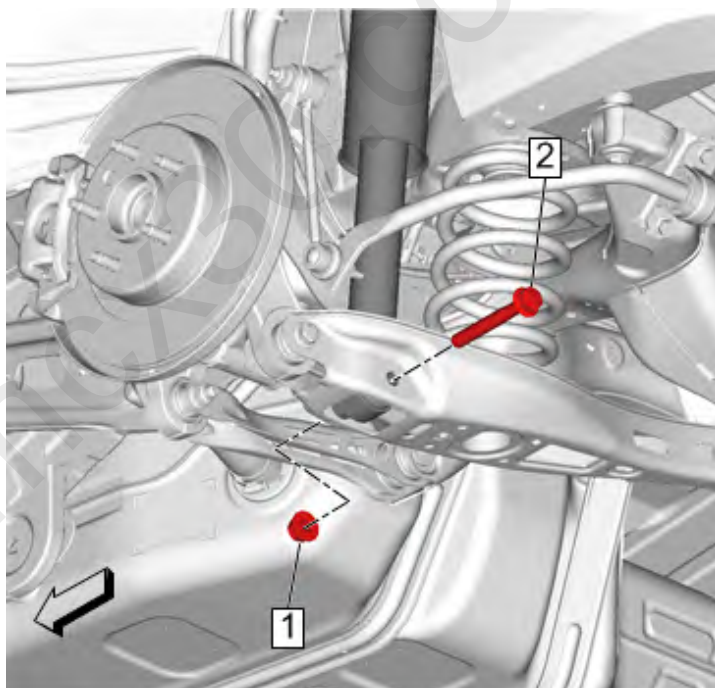


Fig. 43: Rear Shock Absorber Nut, Bolt

Courtesy of GENERAL MOTORS COMPANY

CAUTION: This vehicle is equipped with torque-to-yield or single use fasteners. Install a **NEW** torque-to-yield or single use fastener when installing this component. Failure to replace the torque-to-yield or single use fastener could cause damage to the vehicle or component.

5. Install Rear Shock Absorber Bolt (2) @ Lower Control Arm.
6. Install Rear Shock Absorber Nut (1) @ Lower Control Arm.

Tighten the Bolt

1. First Pass: 160 N.m (118 lb ft)
2. Final Pass: (90 - 105 degrees)

7. Remove the jack stand support from the lower control arm.
8. Install Rear Wheelhouse Liner - [Rear Wheelhouse Liner Replacement - Right Side \(Terrain\)](#), [Rear Wheelhouse Liner Replacement - Right Side \(Equinox\)](#), or [Rear Wheelhouse Liner Replacement- Left Side \(Equinox\)](#), [Rear Wheelhouse Liner Replacement- Left Side \(Terrain\)](#).
9. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)

SHOCK ABSORBER DISPOSAL

WARNING: Gas charged shock absorbers contain high pressure gas. Do not remove the snap ring from inside the top of the tube. If the snap ring is removed, the contents of the shock absorber will come out with extreme force which may result in personal injury.

WARNING: To prevent personal injury, wear safety glasses when centerpunching and drilling the shock absorber. Use care not to puncture the shock absorber tube with the centerpunch.

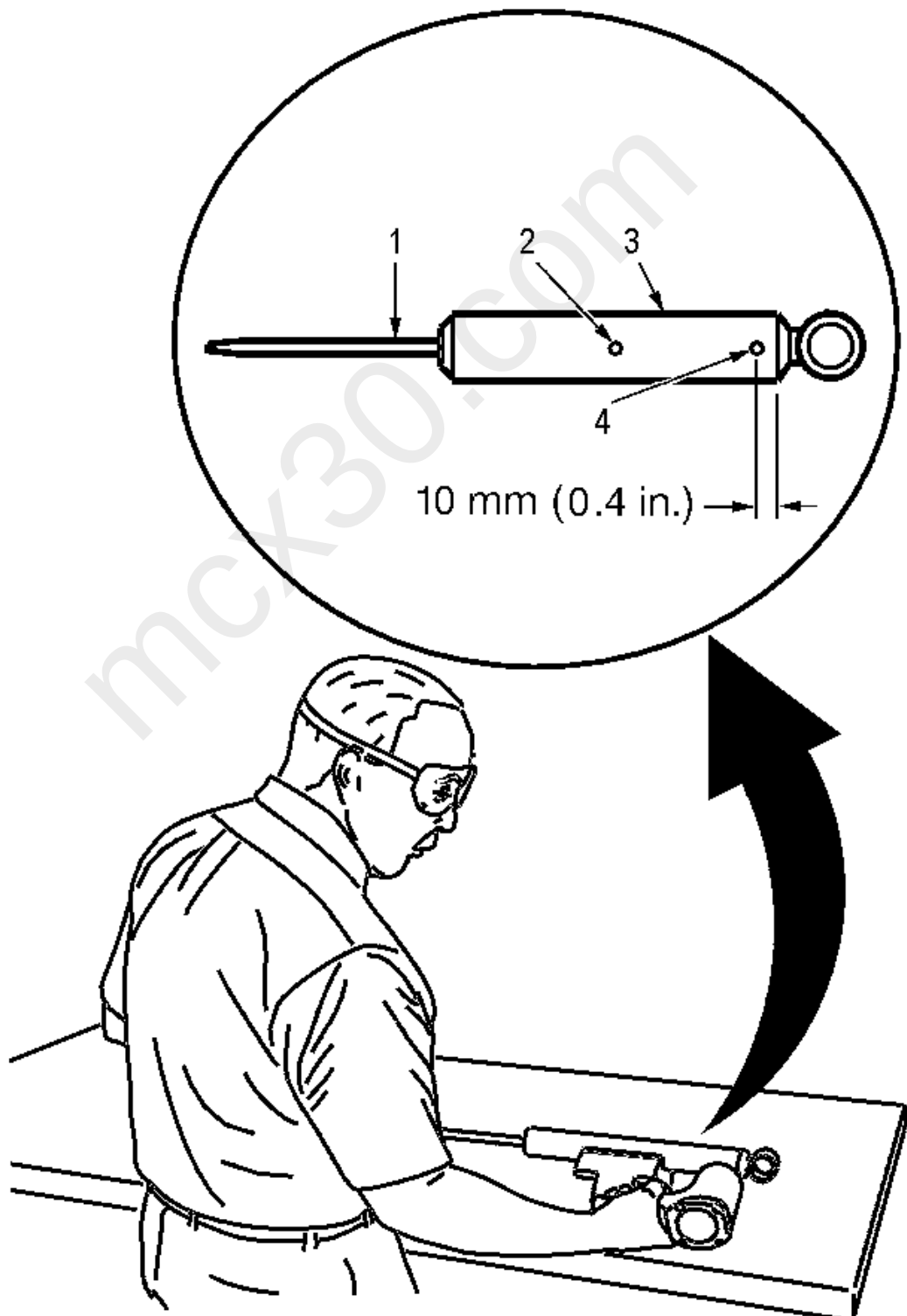


Fig. 44: Drilling Hole In Shock Absorber At Centerpunched Locations
 Courtesy of GENERAL MOTORS COMPANY

1. Make an indentation 10 mm (0.4 in) from the bottom of the tube (3) using a centerpunch.
2. Clamp the shock absorber in a vise horizontally with the shock absorber rod (1) completely extended.
3. Drill a hole in the shock absorber at the centerpunch (4) using a 5 mm (3/16 in) drill bit. Gas or a gas/oil mixture will exhaust when the drill bit penetrates the shock absorber. Use shop towels in order to contain the escaping oil.
4. Make an indentation in the middle (2) of the tube (3) with a centerpunch.
5. Drill a second hole in the shock absorber at the centerpunch (2) using a 5 mm (3/16 in) drill bit. Oil will exhaust when the drill bit penetrates the shock absorber. Use shop towels in order to contain the escaping oil.
6. Remove the shock absorber from the vise. Hold the shock absorber over a drain pan horizontally with the holes down. Move the rod (1) in and out of the tube (3) to completely drain the oil from the shock absorber.

REAR COIL SPRING REPLACEMENT

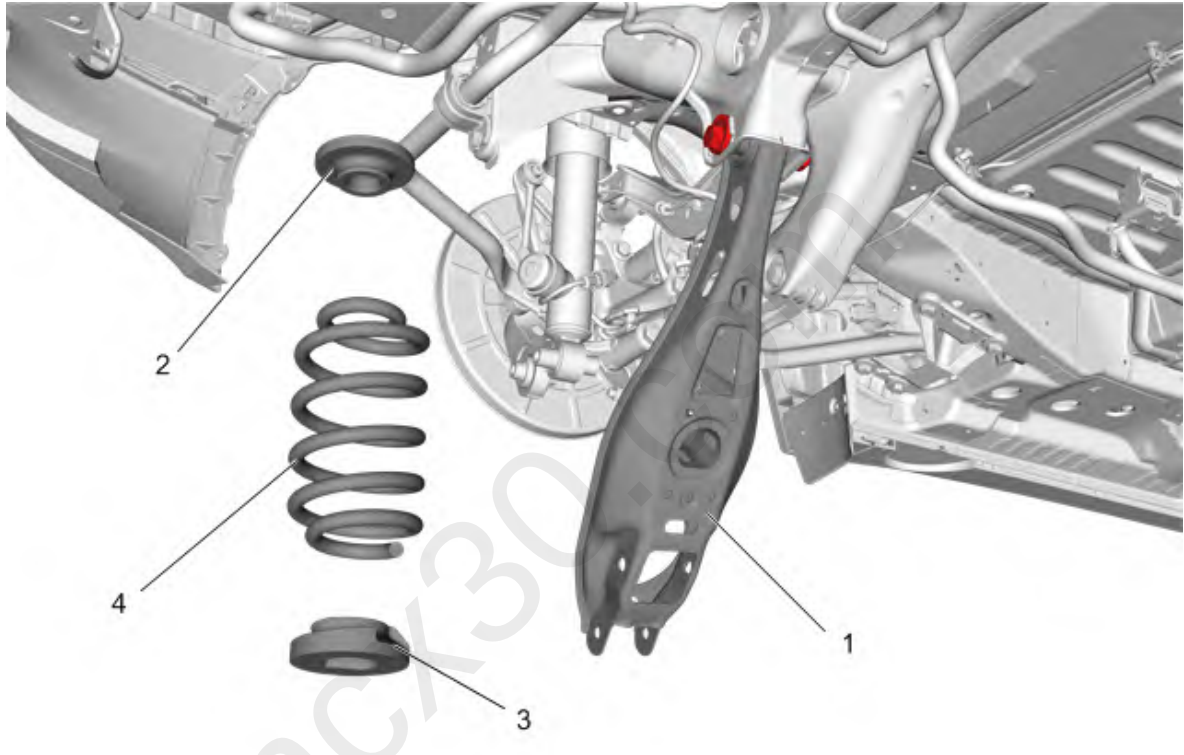


Fig. 45: Rear Coil Spring
 Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Lifting and Jacking the Vehicle 2. Tire and Wheel Removal and Installation	
1	Lower Control Arm Lower Control Arm Procedure Using a transmission jack lower the lower control arm. Lower Control Arm Replacement
2	Rear Coil Spring Upper Insulator NOTE: Inspect the insulator for damage and replace if necessary.

Callout	Component Name
3	Rear Coil Spring Lower Insulator NOTE: Inspect the insulator for damage and replace if necessary.
4	Rear Coil Spring NOTE: Mark the orientation of the spring to insure its assembled correctly.

TRAILING ARM REPLACEMENT

Removal Procedure

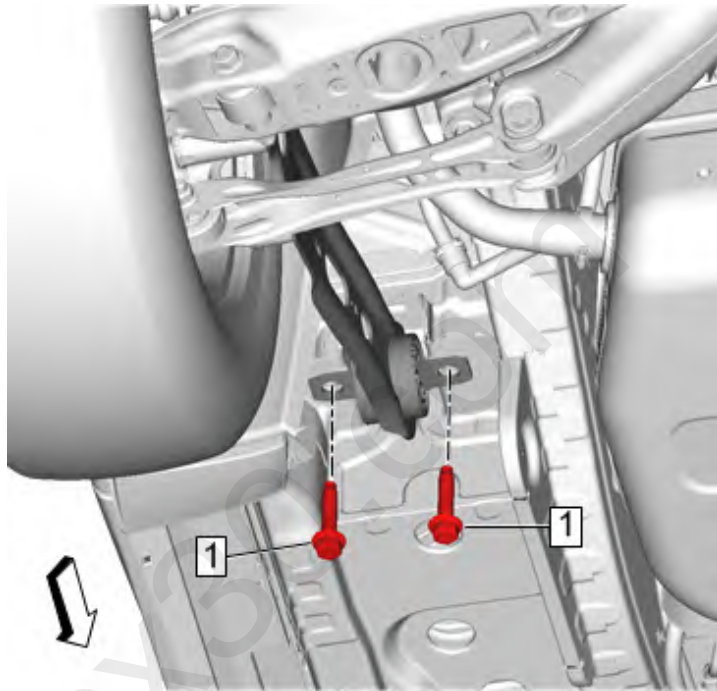


Fig. 46: Left And Right Rear Suspension Trailing Arm Bolts
Courtesy of GENERAL MOTORS COMPANY

1. Remove Rear Suspension Trailing Arm Bolt (1) @ Body and DISCARD [2x]

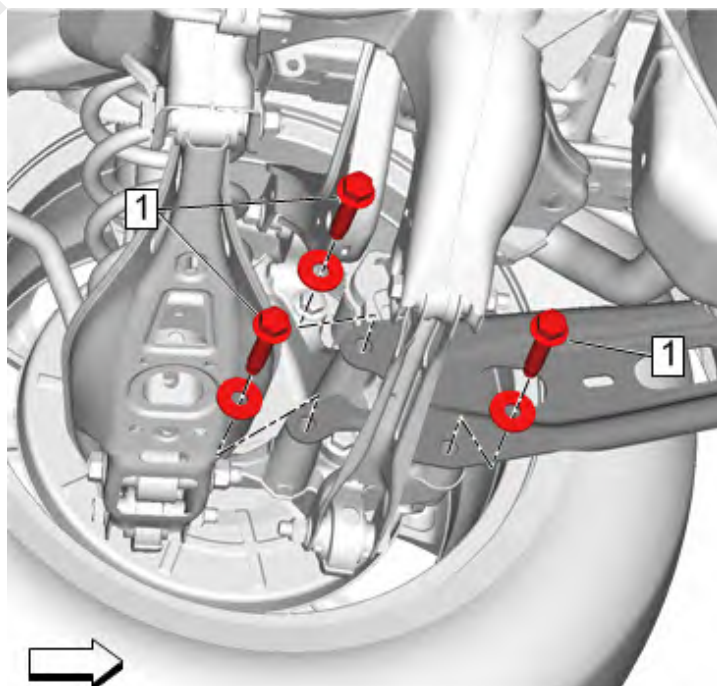


Fig. 47: Rear Suspension Trailing Arm Bolt
Courtesy of GENERAL MOTORS COMPANY

2. Remove Rear Suspension Trailing Arm Bolt (1) @ Knuckle and DISCARD [3x]

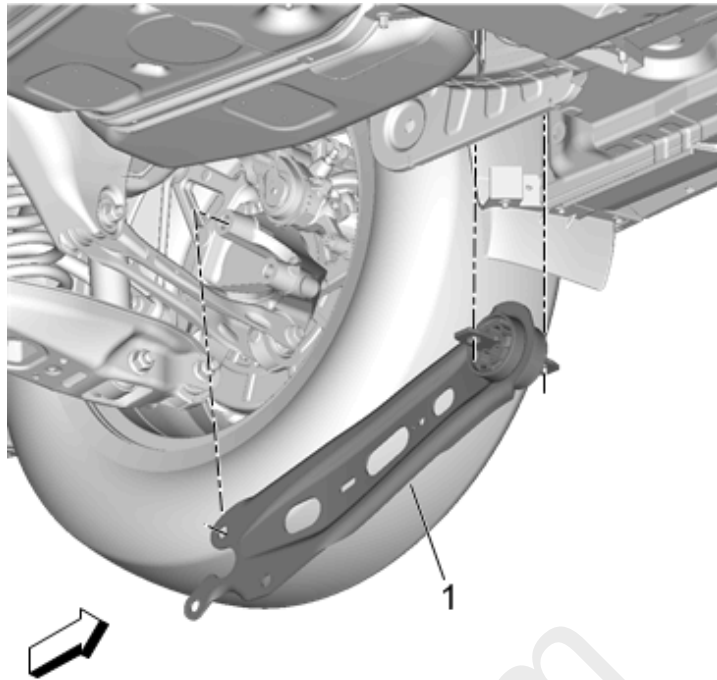


Fig. 48: Rear Suspension Trailing Arm
Courtesy of GENERAL MOTORS COMPANY

3. Remove Rear Suspension Trailing Arm (1)

Installation Procedure

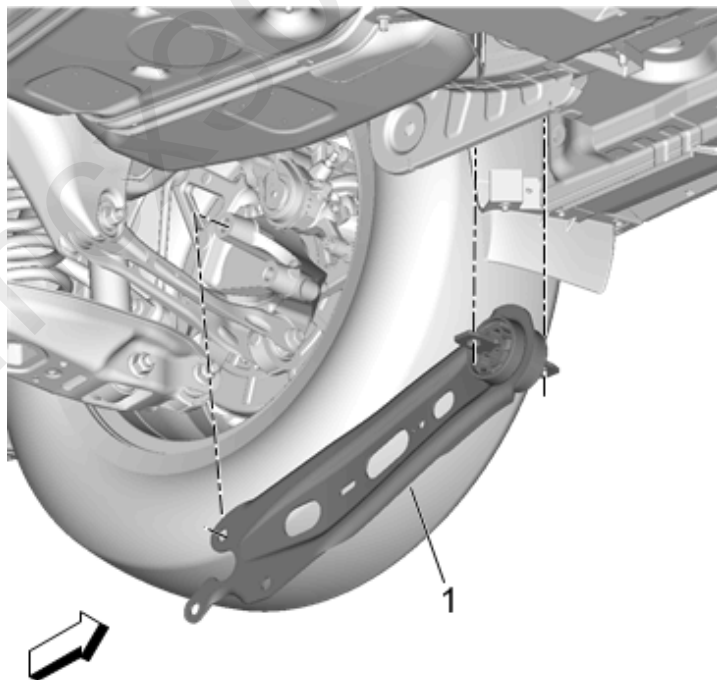


Fig. 49: Rear Suspension Trailing Arm
Courtesy of GENERAL MOTORS COMPANY

1. Install Rear Suspension Trailing Arm (1)

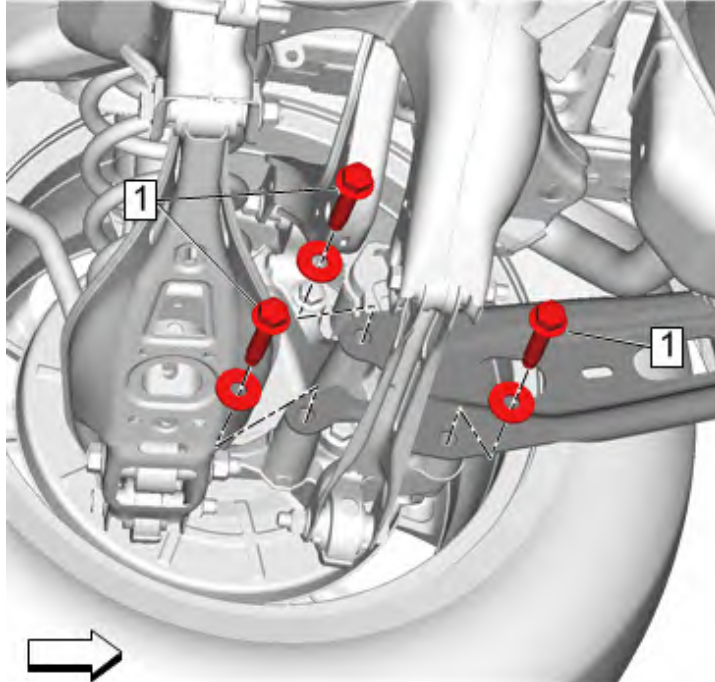


Fig. 50: Rear Suspension Trailing Arm Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: This vehicle is equipped with torque-to-yield or single use fasteners. Install a **NEW** torque-to-yield or single use fastener when installing this component. Failure to replace the torque-to-yield or single use fastener could cause damage to the vehicle or component.

CAUTION: Refer to [Fastener Caution](#) .

NOTE: Apply threadlocker to the rear suspension trailing arm to knuckle bolt threads.
[Adhesives, Fluids, Lubricants, and Sealers](#)

2. Install NEW Rear Suspension Trailing Arm Bolt (1) @ Knuckle [3x]

Tighten

1. First Pass: 160 N.m (118 lb ft)
2. Final Pass: (60 - 75 degrees)

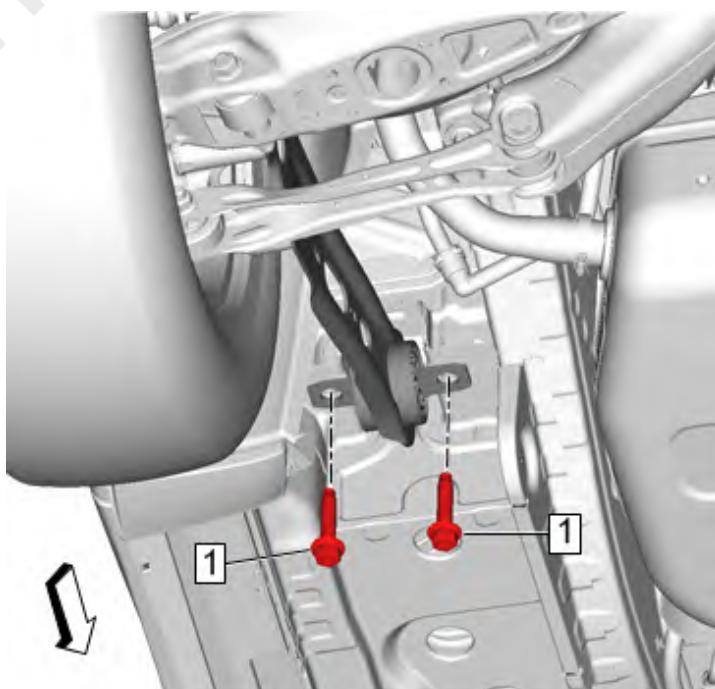


Fig. 51: Left And Right Rear Suspension Trailing Arm Bolts
Courtesy of GENERAL MOTORS COMPANY

3. Install NEW Rear Suspension Trailing Arm Bolt (1) @ Body [2x]

Tighten

1. First Pass: 160 N.m (118 lb ft)
2. Final Pass: (90 - 105 degrees)
4. Install the rear tire and wheel assembly. [Tire and Wheel Removal and Installation](#)

ADJUST LINK REPLACEMENT

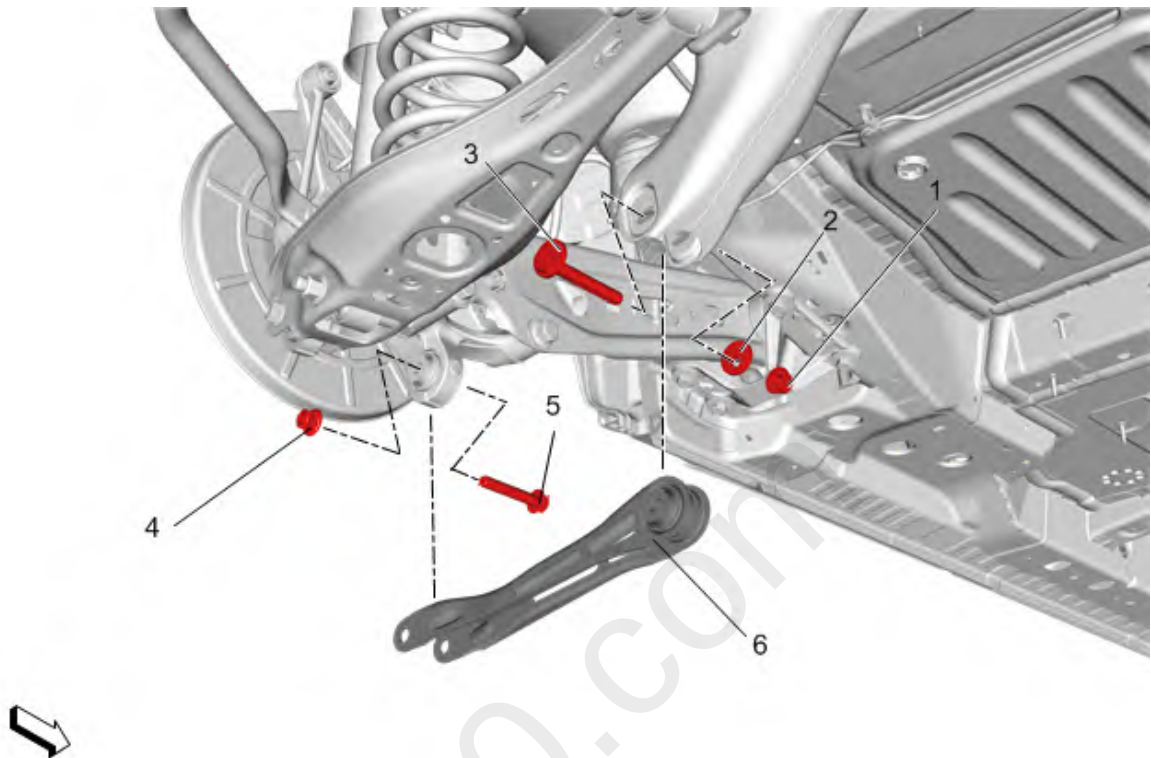


Fig. 52: Adjust Link

Courtesy of GENERAL MOTORS COMPANY

Callout	Component Name
Preliminary Procedure 1. Lifting and Jacking the Vehicle 2. Tire and Wheel Removal and Installation	
1	Rear Suspension Link Inner Nut CAUTION: Refer to Fastener Caution . Tighten 100 N.m (74 lb ft)
2	Rear Suspension Link Inner Washer
3	Rear Suspension Link Inner Cam Bolt
4	Rear Suspension Link Outer Nut

Callout	Component Name
5	Rear Suspension Link Outer Bolt CAUTION: This vehicle is equipped with torque-to-yield or single use fasteners. Install a NEW torque-to-yield or single use fastener when installing this component. Failure to replace the torque-to-yield or single use fastener could cause damage to the vehicle or component. Tighten • First Pass 100 N.m (74 lb ft) • Final Pass Plus 90 to 105 Degrees
6	Rear Suspension Link Procedure <u>Rear Toe Adjustment</u>

REAR SUSPENSION UPPER LATERAL LINK REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Support the lower control arm.
3. Disconnect Wiring Harnesses @ Rear Suspension Lateral Link and reposition harness as necessary.

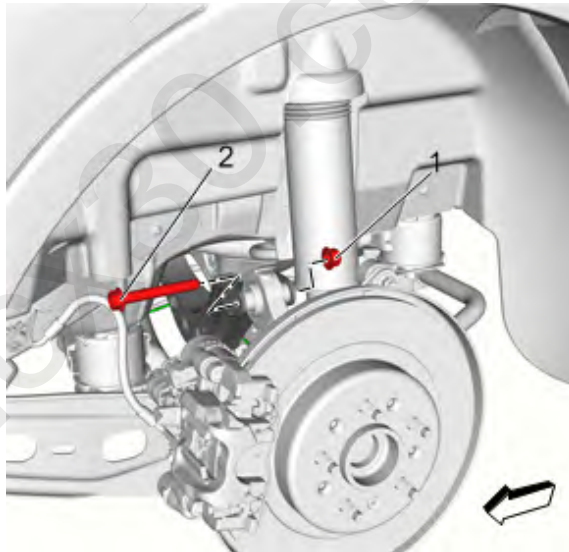


Fig. 53: Rear Suspension Lateral Link Outer Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Remove Rear Suspension Lateral Link Outer Nut (1)
5. Remove Rear Suspension Lateral Link Outer Bolt (2) and DISCARD

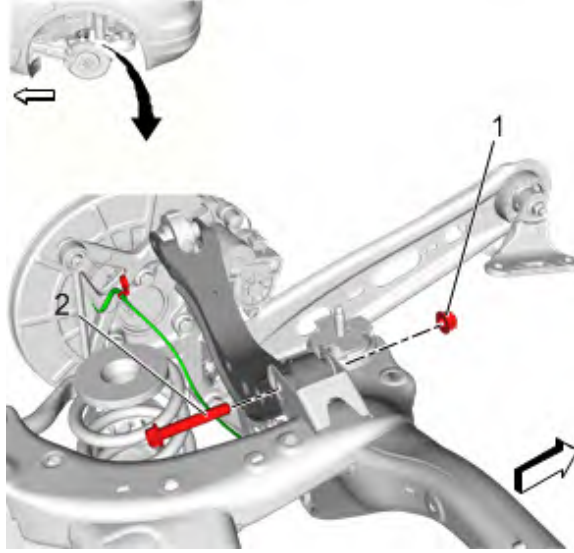


Fig. 54: Rear Suspension Lateral Link Inner Nut And Bolt
 Courtesy of GENERAL MOTORS COMPANY

6. Remove Rear Suspension Lateral Link Inner Nut (1)
7. Remove Rear Suspension Lateral Link Inner Bolt (2) and DISCARD

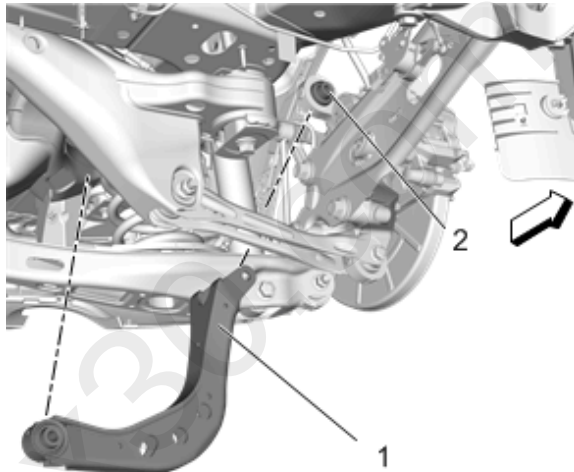
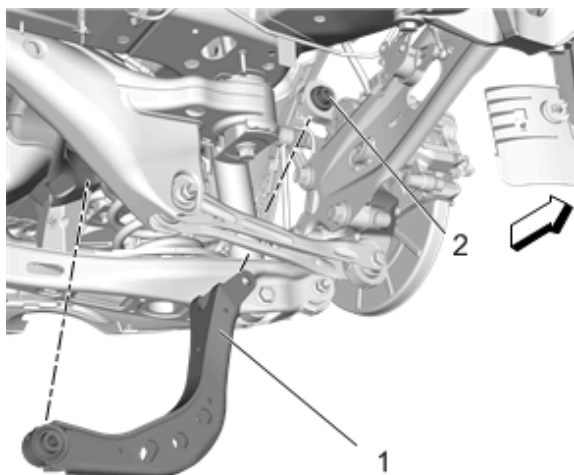


Fig. 55: Rear Suspension Lateral Link
 Courtesy of GENERAL MOTORS COMPANY

8. Remove Rear Suspension Lateral Link (1)

Installation Procedure



1. Install Rear Suspension Lateral Link (1).

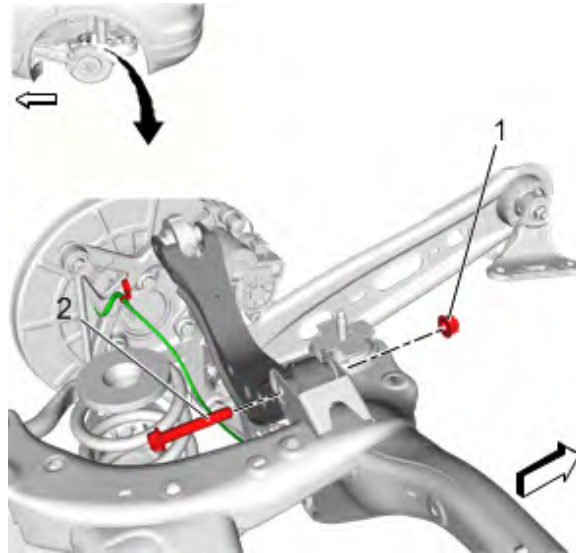


Fig. 57: Rear Suspension Lateral Link Inner Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

CAUTION: This vehicle is equipped with torque-to-yield or single use fasteners. Install a **NEW** torque-to-yield or single use fastener when installing this component. Failure to replace the torque-to-yield or single use fastener could cause damage to the vehicle or component.

2. Install a NEW Rear Suspension Lateral Link Inner Bolt (2).
3. Rear Suspension Lateral Link Inner Nut (1) - Tighten the nut finger tight.

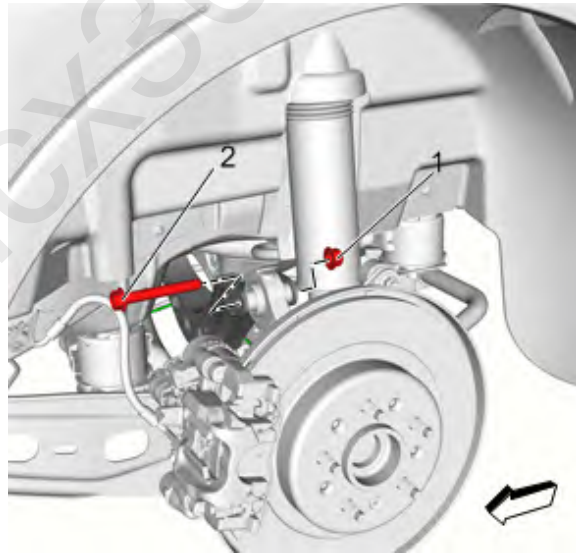


Fig. 58: Rear Suspension Lateral Link Outer Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Install a NEW Rear Suspension Lateral Link Outer Bolt (2)
5. Rear Suspension Lateral Link Outer Nut (1) - Tighten the nut finger tight.
6. Wiring Harnesses @ Rear Suspension Lateral Link - Connect as necessary
7. Install the rear tire and wheel assembly. [Tire and Wheel Removal and Installation](#)
8. Lower the vehicle.
9. Check the trim height. [Trim Height Inspection](#)

CAUTION: Refer to [Fastener Caution](#) .

10. Rear Suspension Lateral Link Inner Nut - Tighten at curb height.

1. First Pass: 100 N.m (74 lb ft)
 2. Final Pass: (90 - 105 degrees)
11. Rear Suspension Lateral Link Outer Bolt - Tighten at curb height.
1. First Pass: 100 N.m (74 lb ft)
 2. Final Pass: (90 - 105 degrees)

LOWER CONTROL ARM REPLACEMENT

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Separate {If equipped} Wiring Harness @ Rear Suspension Lower Control Arm
3. Support the rear suspension lower control arm.

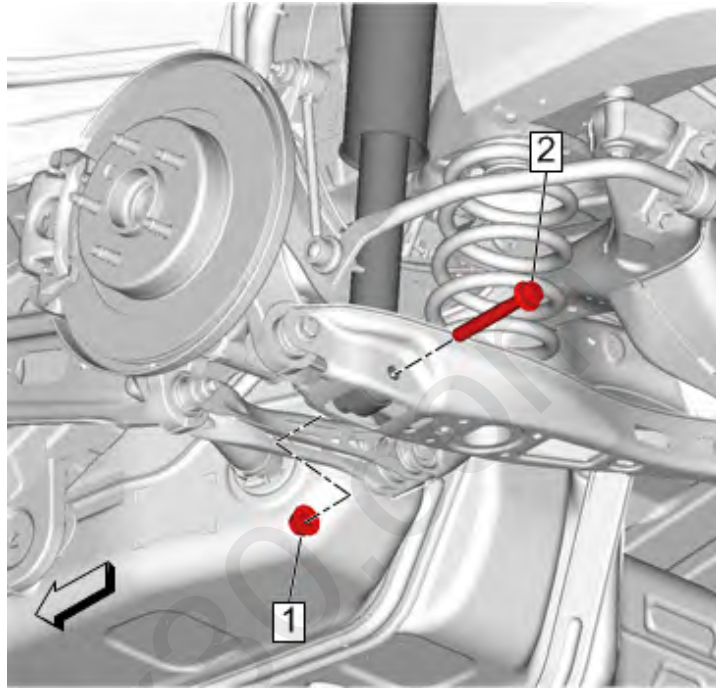


Fig. 59: Rear Shock Absorber Nut, Bolt
Courtesy of GENERAL MOTORS COMPANY

4. Remove Rear Shock Absorber Nut (1)
5. Remove Rear Shock Absorber Bolt (2) and DISCARD

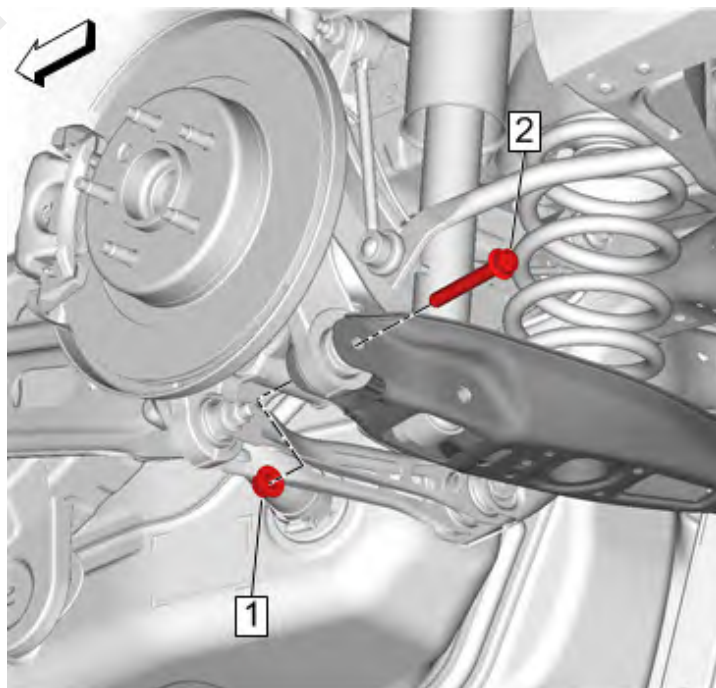


Fig. 60: Rear Suspension Lower Control Arm Outer Nut And Bolt
Courtesy of GENERAL MOTORS COMPANY

6. Remove Rear Suspension Lower Control Arm Outer Nut (1)
7. Remove Rear Suspension Lower Control Arm Outer Bolt (2) and DISCARD

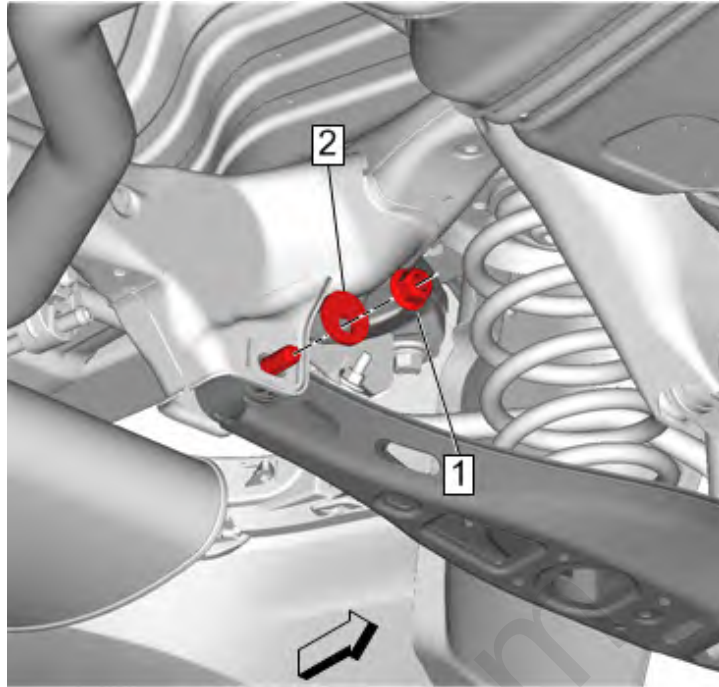


Fig. 61: Rear Suspension Lower Control Arm Adjust Cam And Inner Nut
Courtesy of GENERAL MOTORS COMPANY

8. Remove Rear Suspension Lower Control Arm Inner Nut (1).
9. Remove Rear Suspension Lower Control Arm Adjust Cam (2).

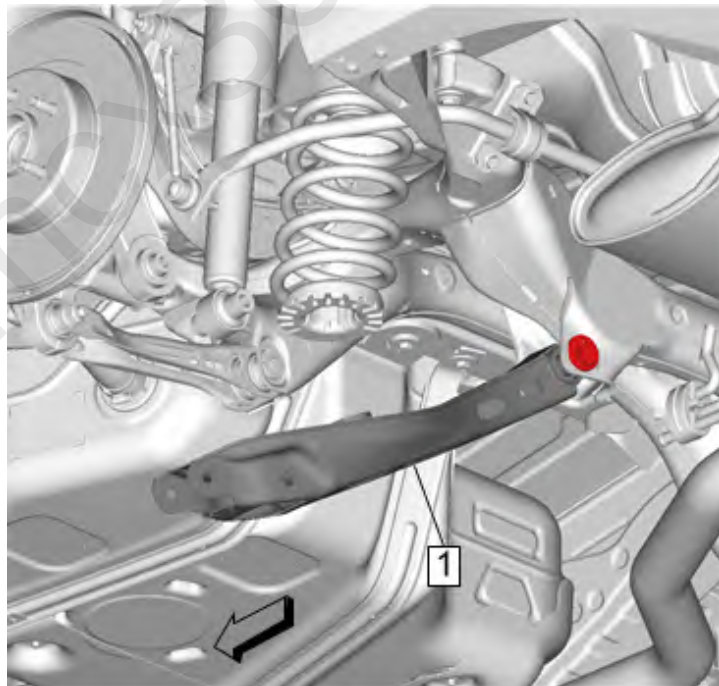


Fig. 62: Lower Control Arm
Courtesy of GENERAL MOTORS COMPANY

10. Lower the lower control arm (1) to provide clearance for the rear coil spring.

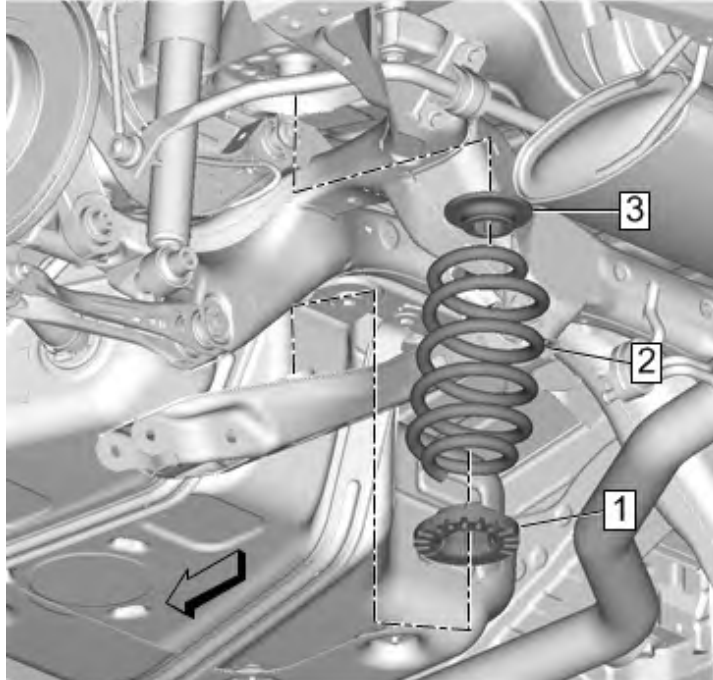


Fig. 63: Rear Coil Spring And Lower Insulator
 Courtesy of GENERAL MOTORS COMPANY

11. Remove Rear Coil Spring Lower Insulator (1)
12. Remove Rear Coil Spring (2)
13. Remove Rear Coil Spring Insulator (3)

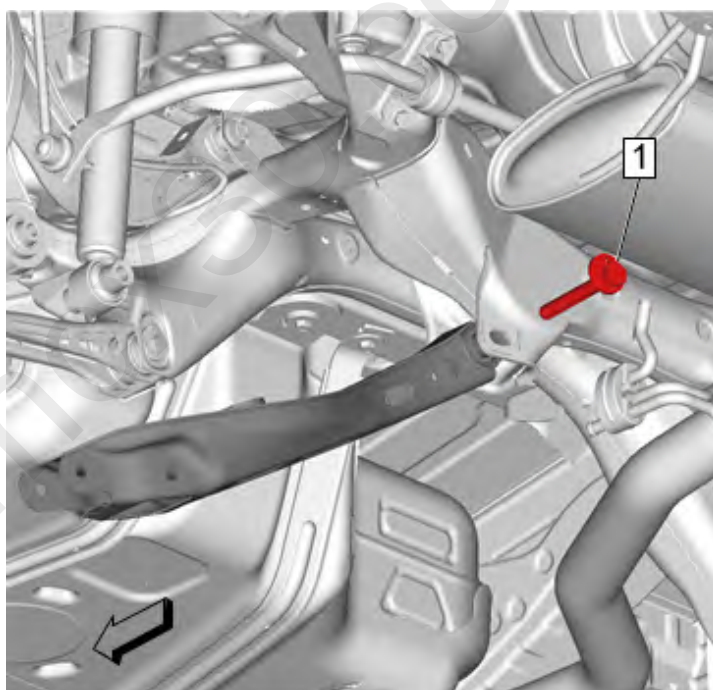


Fig. 64: Rear Suspension Lower Control Arm Inner Bolt
 Courtesy of GENERAL MOTORS COMPANY

14. Remove Rear Suspension Lower Control Arm Inner Bolt (1)

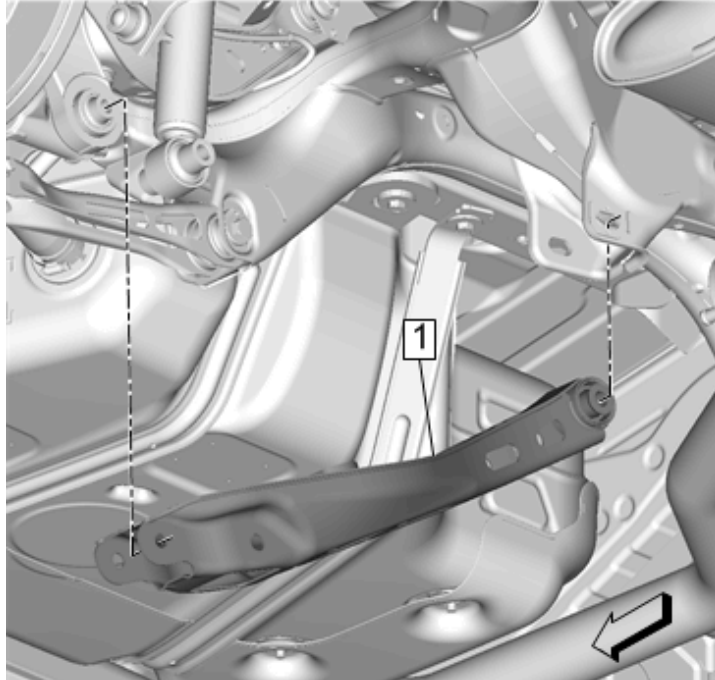


Fig. 65: Rear Suspension Lower Control Arm
Courtesy of GENERAL MOTORS COMPANY

15. Remove Rear Suspension Lower Control Arm (1)

Installation Procedure

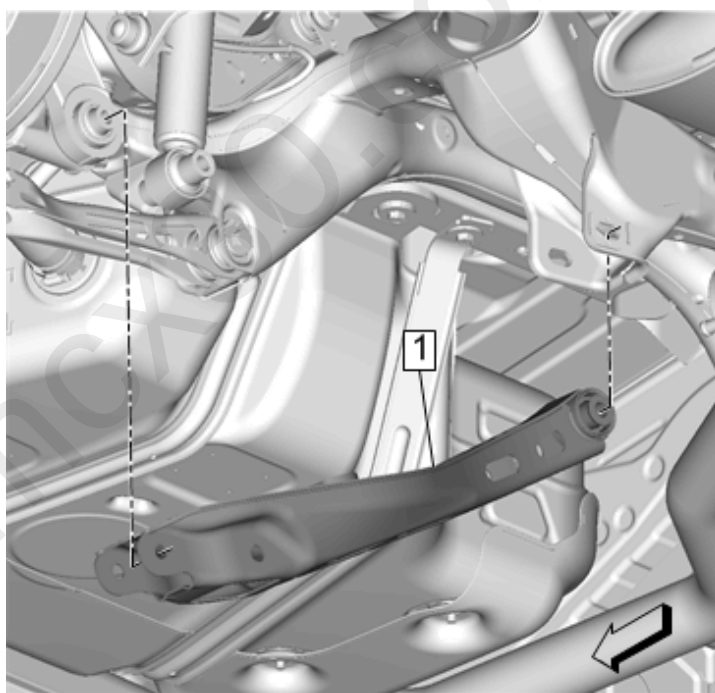


Fig. 66: Rear Suspension Lower Control Arm
Courtesy of GENERAL MOTORS COMPANY

1. Install Rear Suspension Lower Control Arm (1)

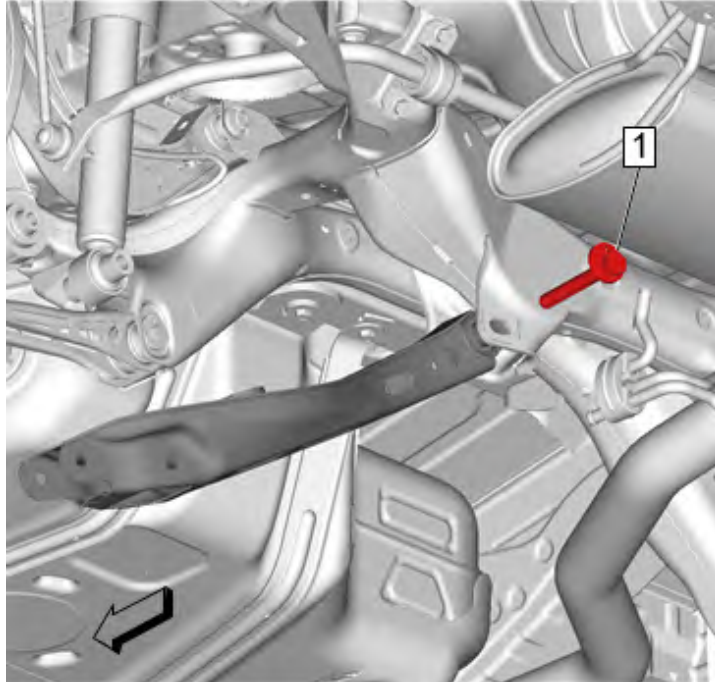


Fig. 67: Rear Suspension Lower Control Arm Inner Bolt
Courtesy of GENERAL MOTORS COMPANY

2. Install Rear Suspension Lower Control Arm Inner Bolt (1)

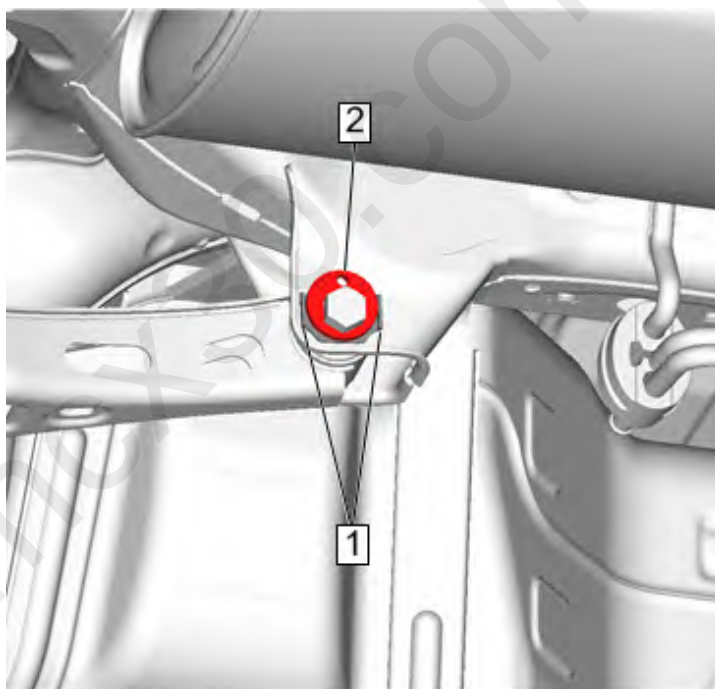


Fig. 68: Cam Washer
Courtesy of GENERAL MOTORS COMPANY

NOTE: Ensure the proper cam bolt and washer installation and orientation.

3. Install the rear suspension lower control arm inner bolt so the cam washer (2) does not overlap the raised structure on the cradle (1), and the cam scribe marks face 9 and 3 o'clock.

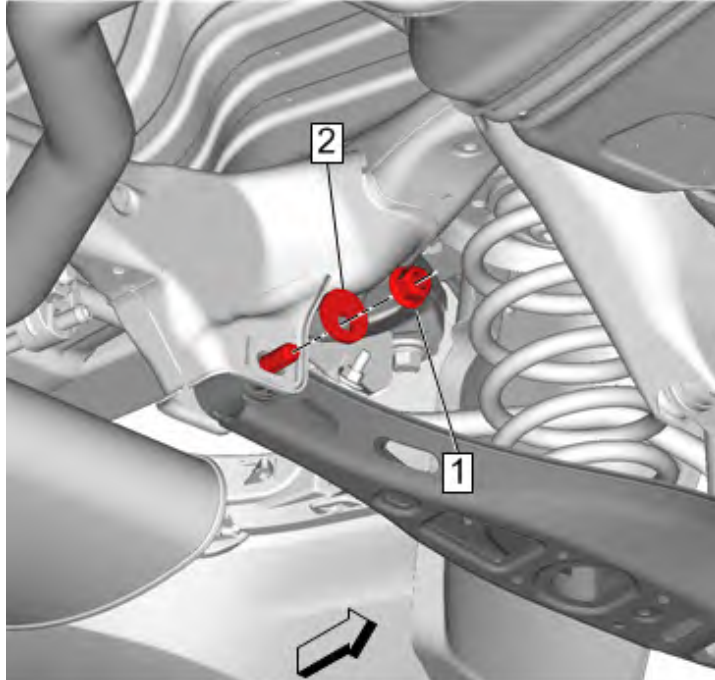


Fig. 69: Rear Suspension Lower Control Arm Adjust Cam And Inner Nut
 Courtesy of GENERAL MOTORS COMPANY

4. Install Rear Suspension Lower Control Arm Adjust Cam (2)
5. Install Rear Suspension Lower Control Arm Inner Nut (1) but do NOT tighten

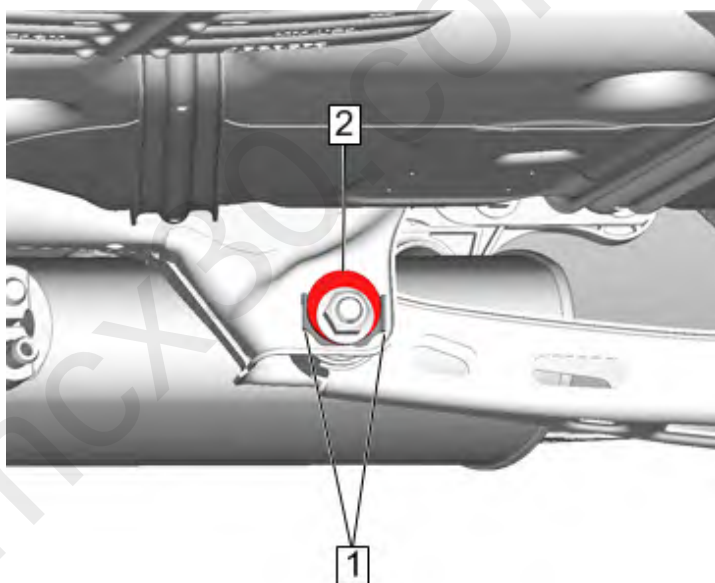


Fig. 70: Cam Washer
 Courtesy of GENERAL MOTORS COMPANY

NOTE: Ensure the proper cam nut and washer installation and orientation.

6. Install the rear suspension lower control arm inner nut so the cam washer (2) does not overlap the raised structure on the cradle (1), and the cam scribe marks face 9 and 3 o'clock.

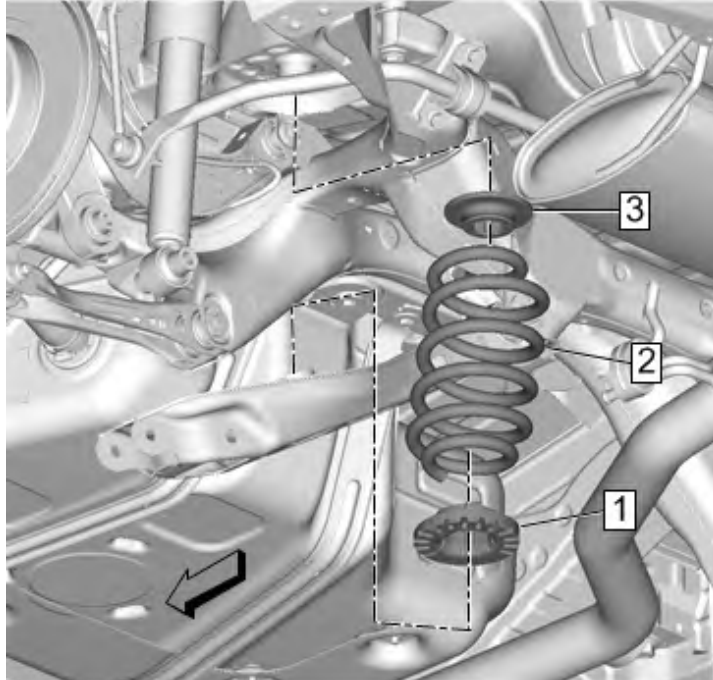


Fig. 71: Rear Coil Spring And Lower Insulator
 Courtesy of GENERAL MOTORS COMPANY

7. Install Rear Coil Spring Insulator (3).
8. Install Rear Coil Spring (2).
9. Install Rear Coil Spring Lower Insulator (1).

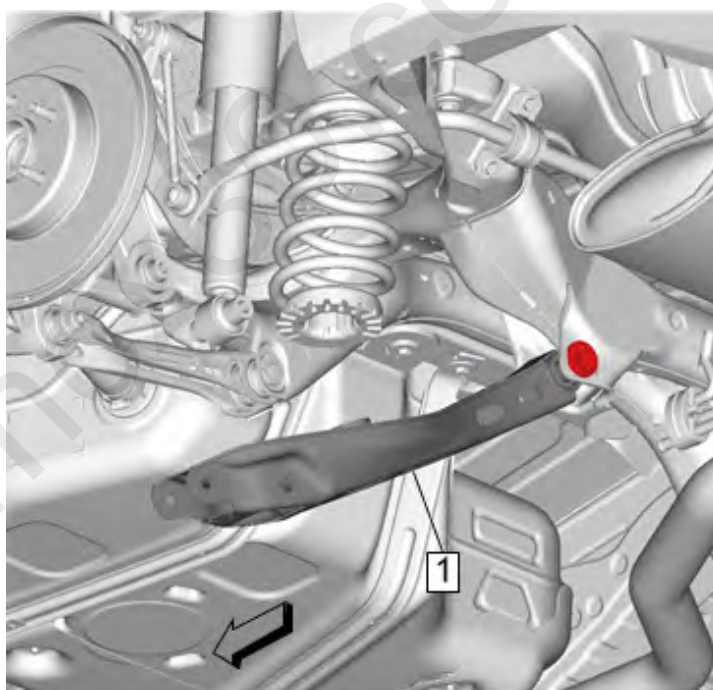


Fig. 72: Lower Control Arm
 Courtesy of GENERAL MOTORS COMPANY

10. Raise the lower control arm (1) back into position.

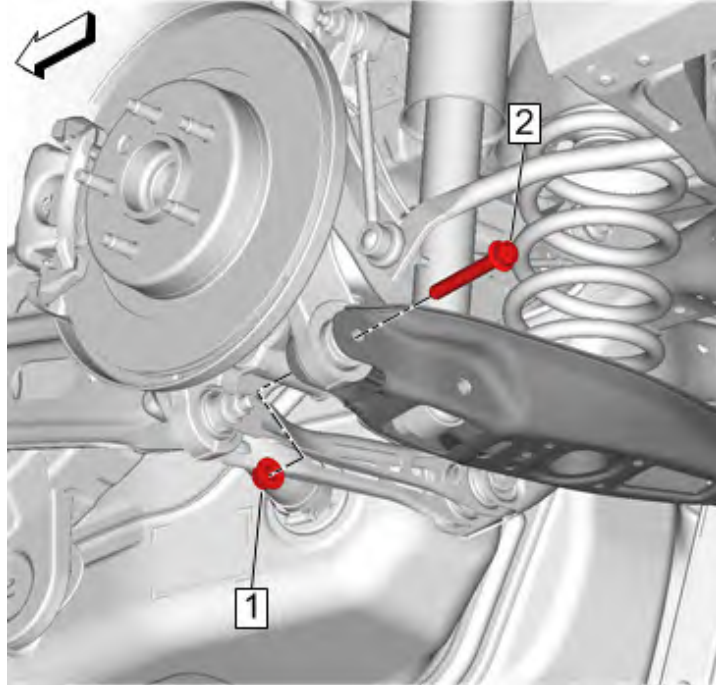


Fig. 73: Rear Suspension Lower Control Arm Outer Nut And Bolt
 Courtesy of GENERAL MOTORS COMPANY

CAUTION: Refer to [Fastener Caution](#) .

CAUTION: This vehicle is equipped with torque-to-yield or single use fasteners. Install a **NEW** torque-to-yield or single use fastener when installing this component. Failure to replace the torque-to-yield or single use fastener could cause damage to the vehicle or component.

11. Install a NEW Rear Suspension Lower Control Arm Outer Bolt (2).
12. Install Rear Suspension Lower Control Arm Outer Nut (1).
13. Tighten Rear Suspension Lower Control Arm Outer Bolt (2).
 1. First Pass: 100 N.m (74 lb ft)
 2. Final Pass: (90-105 degrees)

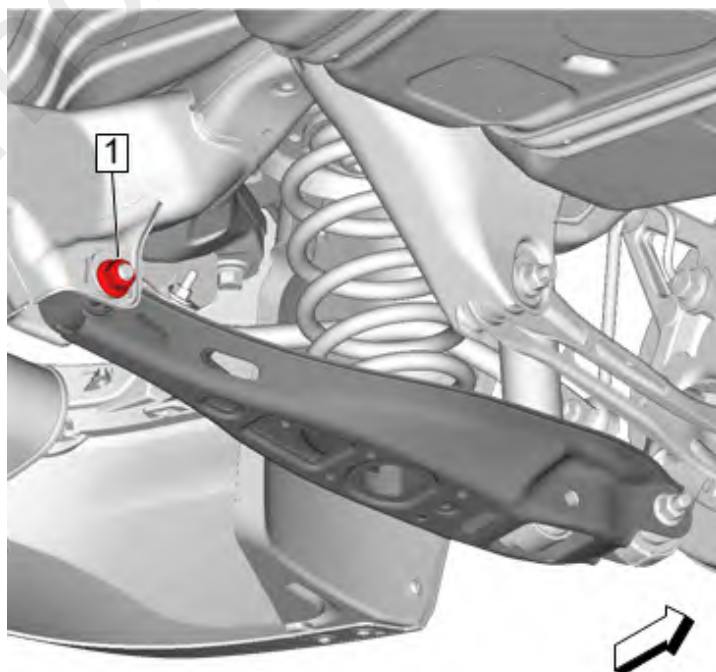


Fig. 74: Rear Suspension Lower Control Arm Inner Nut
 Courtesy of GENERAL MOTORS COMPANY

14. Install Rear Suspension Lower Control Arm Inner Nut (1) - Tighten 160 N.m (118 lb ft)

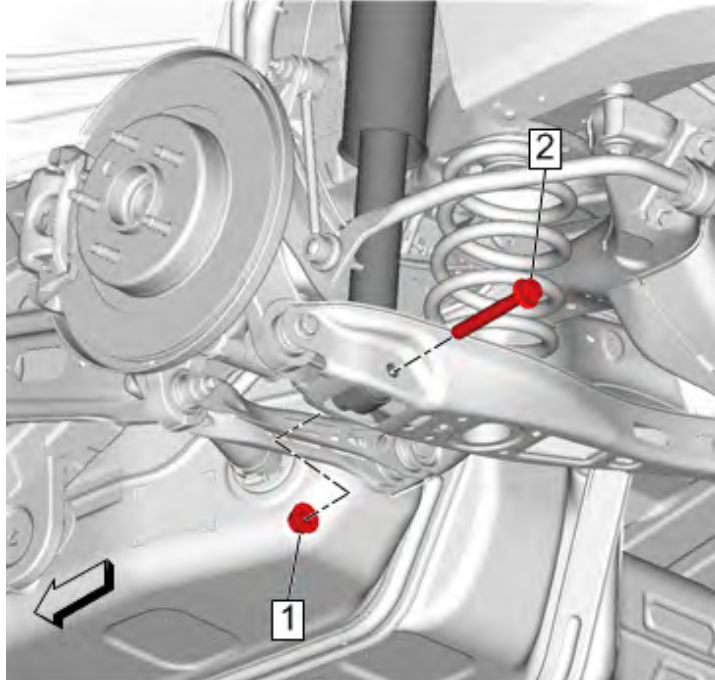


Fig. 75: Rear Shock Absorber Nut, Bolt
Courtesy of GENERAL MOTORS COMPANY

15. Install a NEW Rear Shock Absorber Bolt (2).
16. Install Rear Shock Absorber Nut (1) - [Shock Absorber Replacement](#)
17. Connect {If equipped} Wiring Harness @ Rear Suspension Lower Control Arm.
18. Remove the support from the rear suspension lower control arm.
19. Install the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
20. Verify the rear camber specifications and adjust as necessary. Refer to [Rear Camber Adjustment](#)

WHEEL STUD REPLACEMENT

Special Tools

CH-43631 Ball Joint Remover

Equivalent regional tools: [Special Tools](#).

Removal Procedure

1. Remove the rear tire and wheel assembly. Refer to [Tire and Wheel Removal and Installation](#)
2. Remove Rear Wheel Bearing and Hub Assembly - [Rear Wheel Bearing and Hub Replacement \(AWD\)](#)[Rear Wheel Bearing and Hub Replacement \(FWD\)](#)

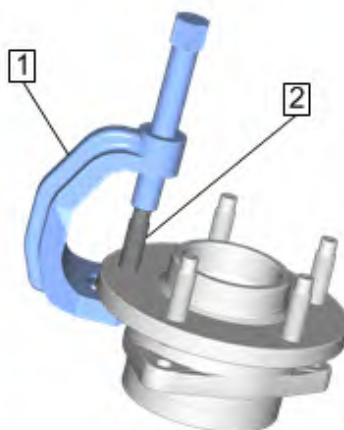


Fig. 76: Wheel Bearing And Hub Assembly
Courtesy of GENERAL MOTORS COMPANY

3. Position the wheel bearing and hub assembly in a suitable vise.
4. Use the **CH-43631** ball joint remover (1) to remove and discard the wheel stud (2).

Installation Procedure

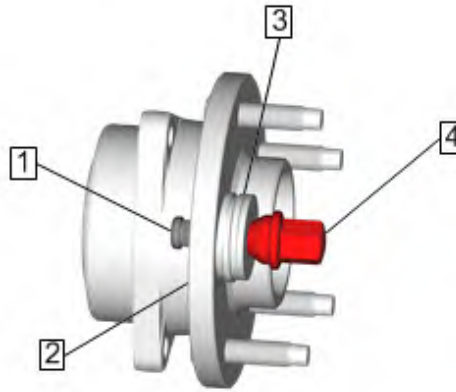


Fig. 77: Wheel Stud, Wheel Nut, Washers And Wheel Bearing Hub Flange
Courtesy of GENERAL MOTORS COMPANY

1. Install the NEW wheel stud (1) into the wheel bearing hub flange (2).
2. Add enough washers (3) in order to draw the stud into the hub flange (2).
3. Install the wheel nut (4) against the washers (3).
4. Tighten the wheel nut (4) until the head of the wheel stud (1) is fully seated against the back of the bearing hub flange (2).
5. Remove the wheel nut (4) and the washers (3).
6. Remove the wheel bearing and hub assembly from the vise.
7. Install Rear Wheel Bearing and Hub Assembly - **Rear Wheel Bearing and Hub Replacement (AWD)****Rear Wheel Bearing and Hub Replacement (FWD)**.
8. Install the rear tire and wheel assembly. Refer to **Tire and Wheel Removal and Installation** .

DESCRIPTION AND OPERATION

REAR SUSPENSION DESCRIPTION AND OPERATION

The rear suspension system on this vehicle is of the independent link type. Rear suspension adjustment is achieved through adjustable toe links and lower control arms. The rear coil springs are retained between the body and the lower control arm. Rubber insulators isolate the coil spring at both top and bottom. The rear suspension consists of 2 shock absorbers attached to the lower control arm and the reinforced body areas.

The rear suspension system performs the following functions:

- Maintains the relationship of the rear axle to the body
- Controls the torque reaction on acceleration and braking

The suspension system consists of the following components:

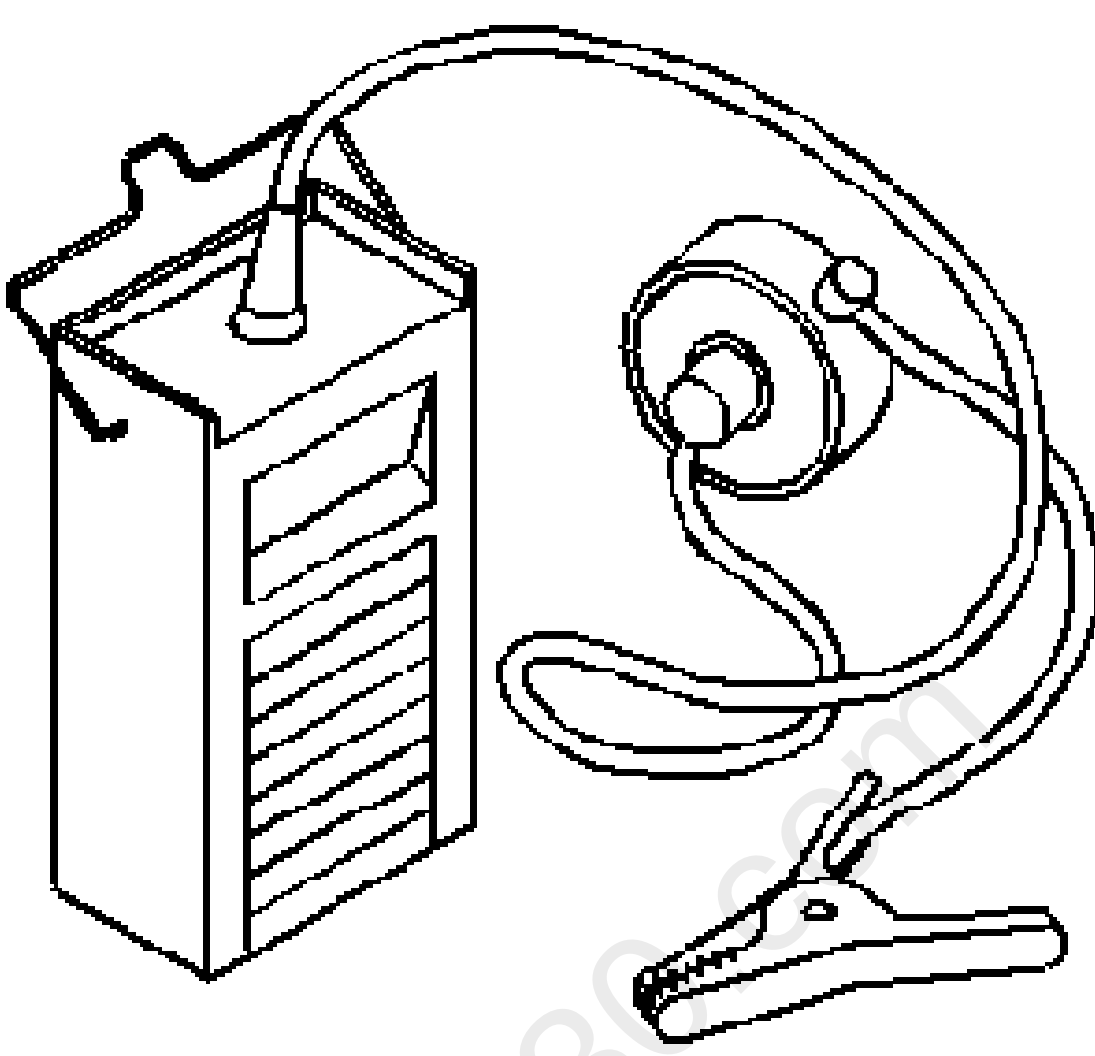
- Support assembly
- Coil springs and insulators
- Stabilizer shaft, insulators and stabilizer links
- Toe adjust links
- Upper lateral links
- Lower control arms
- Trailing arms
- Knuckles

- Wheel bearing/hub
- Shock absorbers

SPECIAL TOOLS AND EQUIPMENT

SPECIAL TOOLS

Illustration	Tool Number/Description
	CH-49455 J-49455 Ball Joint Remover

Illustration	Tool Number/Description
 A line drawing of a torque angle meter system. On the left is a rectangular control unit with a handle on top and a cable reel on the side. A cable is coiled around the reel. The cable extends from the reel and ends in a torque wrench with a hook end. The entire drawing is enclosed in a rectangular frame.	J 36660-A Torque Angle Meter